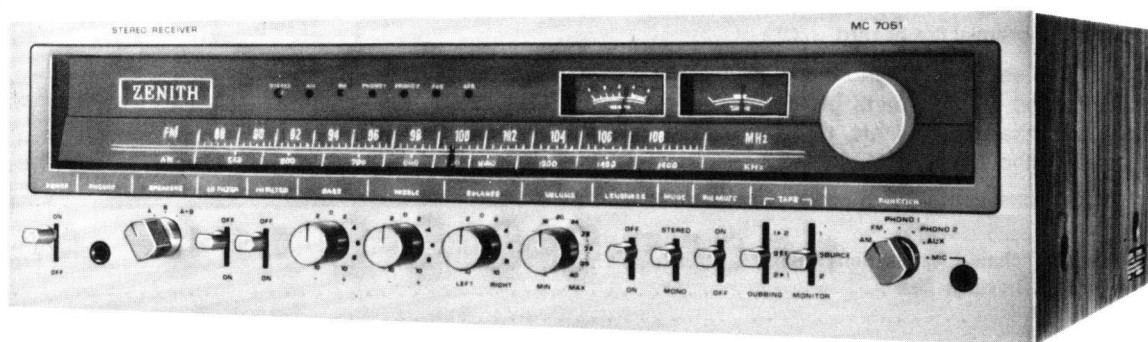




SERVICE MANUAL



MODEL MC7051
ILLUSTRATED

STEREO RECEIVERS MODELS MC7031, MC7041, MC7051

**ZENITH RADIO CORPORATION
PARTS AND SERVICE DIVISION**

11000 SEYMOUR AVENUE, FRANKLIN PARK, ILLINOIS 60131

To the Service Technician

PRODUCT SAFETY SERVICING GUIDELINES FOR ALL AUDIO AMPLIFIERS AND RADIO RECEIVERS

CAUTION: No modification of any circuit should be attempted. Service work should be performed only after you are thoroughly familiar with all of the following safety checks and servicing guidelines. To do otherwise increases the risk of potential hazards and injury to the user.

SAFETY CHECKS

SUBJECT: Fire & Shock Hazard

1. Be sure that all components are positioned in such a way to avoid possibility of adjacent components shorts. This is especially important on those chassis which are transported to and from the repair shop.
2. Always replace all protective devices such as insulators and barriers after working on a receiver.
3. Check for frayed insulation on wires including the AC cord. Also check across-the-line components for damage and replace if necessary.
4. All fuses and certain resistors and capacitors which are of the flameproof type (shaded on the schematic diagrams and parts lists) must be replaced with exact Zenith types to prevent potential fire hazard.
5. After re-assembly of the set always perform an AC leakage test on the exposed metallic parts of the cabinet such as the knobs, antenna terminals, etc. to be sure the set is safe to operate without danger of electrical shock.

Do not use a line isolation transformer during this test. Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner: Connect a 1500 ohm 10 watt resistor, (63-10401-76) paralleled by a .15 mfd, AC type capacitor (22-4384) between a known good earth ground (water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination 1500 ohm resistor and .15 mfd. capacitor. Reverse the AC plug on the set and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts RMS. This corresponds to 0.5 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.

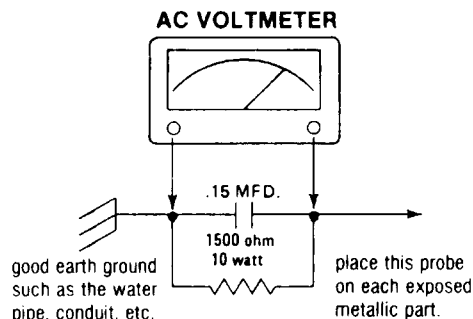


TABLE OF CONTENTS

Safety Servicing Guidelines and Technical Applications Index	Inside Front Cover
Index to Schematics and Related Drawings	Page 1
Product Features	Pages 2-5
Record Changer Features	Page 6
Tape Unit Features	Page 7
Introduction	Page 8
Product Features	Page 9
General Information	Page 10
Alignment Procedures	Pages 11-15
Disassembly	Pages 16-19
Theory and Application	Pages 20-22
Parts Lists	Pages 24-36
Integrated Circuit Block Diagrams	Pages 38-41
Schematic, Related Drawings and Exploded Views	Pages 43-60

TECHNICAL APPLICATIONS INDEX

Various "HF" series service manuals contain information relating to solid state device theory, operation and circuit applications as introduced into our products. In addition, service procedures are also explained, if required, in the appropriate service manuals. Such information has been included in the following service manuals:

- HF 18: Theory — Diodes (Including Zener and SCR), Transistors, (PNP, NPN, Darlington, and JFET). Applications — Chassis 29AT24 (JFET FM-RF, Multiplex, Electronic Touch Switching), Complementary Symmetry, Chassis 11ZT27 (Electronic Filter).
- HF 22: Theory — JFET, IGFET, MOSFET, Applications — Dual Gate MOSFET FM-RF, JFET Bplex Detector, Quasi-Complementary Symmetry.
- HF 23: Applications — Model C9029/Chassis 15WCA10 Four Channel Decoder.
- HF 26: Applications — Chassis 15WDR51 (JFET Meter Circuit, Multiplex IC, Four Channel Decoding).
- HF 27: Applications — Model SD2568 Speaker Switching Circuitry.
- HF 28: Applications — Model D9013W Allegro Speaker System.
- HF 29: Theory — Light Emitting Diodes (LED). Applications — Three Light Tuning (Target Tuning), Multiplex IC.
- HF 29S1: Applications — Snap-off Escutcheon and Out Front Chassis Removal, "E" Line Models.
- HF 30: Applications — Snap-off Escutcheon and Out Front Chassis Removal, "F" Line Models.
- HF 31: Theory and Applications — Chassis 12WGR59 (Ceramic Filters, IF IC, Quadrature Detector, Interstation Muting, PLL Multiplex IC, Audio). General Product Information — Audio Circuitry (including Two on Two Speaker Matrix, Allegro Speaker Systems), "G" Line Disassembly Procedures.
- HF 32S2: Applications — Four Channel Sound Reproduction Input Vs. Output, Repairing Push Button Switches, Record Changer and Phono Cartridge Inter Changeability, Chassis 12WGR59 Accessibility.
- HF 32: Applications — "H" Line Disassembly Procedures, Part Number Identification, Record Changer and Phono Cartridge Interchangeability, "H" Line Allegro Speaker Systems and Repair Procedures.
- HF 33: Theory and Applications — Chassis 3WJR52 (Ceramic Filters, IF IC's for AM and FM Quadrature Detector, PLL Multiplex IC, Audio). General Product Information — Audio Circuitry (including Output IC), "J" Line Disassembly Procedures.
- HF 33S1: Applications — "J" Line Allegro Speaker System Repair Procedures.
- HF 34: Applications — "K" Line Allegro Speaker Systems and Repair Procedures. General Product Information.
- HF 39: Applications — "K" Line Allegro Speaker Systems and Repair Procedures.

INDEX

*REFER TO MASTER INDEX FOR UPDATED INFORMATION

CHASSIS OR MODEL	INFORMATION ON PAGE	PRIOR DATA CONTAINED IN	CHASSIS OR MODEL	INFORMATION ON PAGE	PRIOR DATA CONTAINED IN
1WEA10 (Z1)	—	HF 28S1, 29, 30	J3000W1	—	HF 33
1WEA11 (Z1)	—	HF 28S1, 29, 30	E9012W (1)	—	HF 29S1, 30
1WGR50	—	HF 31S1, 31S2	G9012W1	—	HF 31, 31S1
1WJR55	—	HF 33, 33S1	E9014W (1)	—	HF 29S1, 30
3WEA10 (Z1)	—	HF 29, 29S2, 30	E9014X (1)	—	HF 29S1, 30
3WGR50	—	HF 31, 31S1	G9014W	—	HF 31S1
3WHR50	—	HF 32, 32S1	E9018W (1)	—	HF 29S1, 30
3WJR50, 50Z	—	HF 33, 33S1, 34	G9019W	—	HF 31, 31S1
3WJR51, 51Z	—	HF 33, 33S1	E9026W	—	HF 30S1
3WGR52	—	HF 31, 31S1	E9029W	—	HF 29S1
3WHR52	—	HF 32S1	IS4020	—	HF 35
3WJR52, 52Z	—	HF 33, 33S1	IS4021	—	HF 41
3WGR54	—	HF 31, 32S1	IS4030	—	HF 35
3WR10X	—	HF 40, 47	IS4031	—	HF 41
3WR11X	—	HF 40, 47	IS4040	—	HF 35
3WR12X	—	HF 40, 47	IS4041	—	HF 41
5WER50	—	HF 28S1, 29, 29S1, 30, 30S1	IS4060	—	HF 36
5WFR50	—	HF 30, 31S1, 31	IS4061-1	—	HF 42
5WER51	—	HF 29, 29S1, 30, 30S1	IS4061-2	—	HF 43
5WFR51	—	HF 30, 30S1	IS4070	—	HF 36
5WER52	—	HF 29S2, 30, 30S1	IS4071-1	—	HF 42
5WER52Z1	—	HF 30, 30S1	IS4071-2	—	HF 43
5WER52Z2	—	HF 30, 30S1	IS4080	—	HF 36
5WER52Z3	—	HF 30, 30S1	IS4081-1	—	HF 42
5WER53	—	HF 29, 29S1, 30	IS4081-2	—	HF 43
5WFR53	—	HF 30, 30S1	IS4081-3	—	HF 44
6WGR55	—	HF 31, 31S1	MC1000	—	HF 39
6WHR55	—	HF 32, 32S1	MC1000-11	—	HF 39
6WGR56	—	HF 31, 31S1	MC1000-12	—	—
6WHR56	—	HF 32, 32S1	MC2000	—	HF 39
6WGR57	—	HF 31, 31S1	MC2000-11	—	HF 39
6WHR57	—	HF 32, 32S1	MC2000-12	—	—
6WGR90	—	HF 31S1	MC3000	—	HF 39
6WGR91	—	HF 31S2	MC3000-11	—	HF 39
8WJR56	—	HF 33	MC3000-12	—	—
8WJR57	—	HF 33	MC4000	—	HF 39
12WGR58	—	HF 31, 32S1	MC4000-11	—	HF 39
12WGR59	—	HF 31, 31S1	MC4000-12	—	—
12WHR29	—	HF 32, 32S1	MC6010	—	HF 37
15WJR29	—	HF 33, 33S1, 34	MC6020	—	HF 45
15WEA10	—	HF 29S1, 30	MC6060	—	HF 37
15WFR51	—	HF 30, 30S1	MC6060-1	—	HF 37S1
15WER55	—	HF 29, 29S1, 29S2, 30, 30S1	MC6065	—	HF 45
15WFR55	—	HF 30, 30S1	MC7030	—	HF 38
15WER56	—	HF 29, 29S1, 29S2, 30	MC7031	8 to 60	—
15WFR57	—	HF 30, 30S1	MC7040	—	HF 38
35WFR50	—	HF 30, 30S1, 32S1	MC7041	8 to 60	—
G1000W	—	HF 31, 31S1	MC7050	—	HF 38
H1000W, W1, W2, W3	—	HF 32	MC7051	8 to 60	—
J1000W1, W2	—	HF 33	MC9020	—	RC 28
G2000W	—	HF 31, 31S1	MC9025	—	RC 33
G2000W11	—	HF 31S1	MC9030	—	RC 29
H2000W, W3	—	HF 32	MC9035	—	RC 34
J2000W1, W2	—	HF 33	MC9040	—	RC 30
G3000W	—	HF 31, 31S1	MC9050	—	RC 37
G3000W11	—	HF 31S1	MC9070	—	TR 41
H3000W, W3	—	HF 32	MC9070-1	—	TR 41S1

HF 28S1 is Part No. 923-734
 HF 30 is Part No. 923-809
 HF 31S2 is Part No. 923-864
 HF 33S1 is Part No. 923-921
 HF 37 is Part No. 923-942
 HF 41 is Part No. 923-962
 HF 45 is Part No. 923-971

HF 29 is Part No. 923-740
 HF 30S1 is Part No. 923-841
 HF 32 is Part No. 923-874
 HF 34 is Part No. 923-927
 HF 38 is Part No. 923-943
 HF 42 is Part No. 923-966
 HF 46 is Part No. 923-972

HF 29S1 is Part No. 923-762
 HF 31 is Part No. 923-848
 HF 32S1 is Part No. 923-895
 HF 35 is Part No. 923-933
 HF 39 is Part No. 923-944
 HF 43 is Part No. 923-967
 HF 47 is Part No. 927-973

HF 29S2 is Part No. 923-784
 HF 31S1 is Part No. 923-857
 HF 33 is Part No. 923-901
 HF 36 is Part No. 923-934
 HF 40 is Part No. 923-945
 HF 44 is Part No. 923-970
 HF 48 is Part No. 923-974

PRODUCT FEATURES

SEE NOTES ON PAGE 5

• REFER TO PAGE ONE INDEX FOR MODELS IN THIS MANUAL •

CABINET			CHASSIS		SPEAKERS			RECORD CHANGER	OTHER FEATURES		
MODEL	COLOR	STYLE NOTE A	MODEL	TYPE	PART NUMBER	IMPED. (In Ohms)	QTY. AND SIZE (In Inches)	PART NUMBER NOTE B	TAPE PROVISION NOTE C	SPEAKER PROVISION NOTE D	MISC. NOTE E
IS4021	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-573	8TK-R/P 969-51	A1, A2, SPKAB	AUX, DL, H, HIF, LD, T, TO
IS4031	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-573	CASS-R/P 969-52	A1, A2, SPKAB	AUX, DL, H, HIF, LD, T, TO
IS4041	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-573	CASS-R/P 969-52 8TK-R/P 969-51	A1, A2, SPKAB	AUX, DL, H, HIF, LD, T, TO
IS4061-1	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-579	8TK-R/P 969-55	A1, A2, A3, A4, SPKOAB	AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
IS4061-2	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-579	8TK-R/P 969-51	A1, A2, A3, A4, SPKOAB	AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
IS4071-1	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-579	CASS-R/P 969-56	A1, A2, A3, A4, SPKOAB	AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
IS4071-2	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-579	CASS-R/P 969-56	A1, A2, A3, A4, SPKOAB	AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
IS4081-1	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-579	CASS-R/P 969-56 8TK-R/P 969-55	A1, A2, A3, A4, SPKOAB	AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
IS4081-2	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-579	CASS-R/P 969-56 8TK-R/P 969-51	A1, A2, A3, A4, SPKOAB	AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
IS4081-3	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-579	CASS-R/P A-8051 8TK-R/P A-7021	A1, A2, A3, A4, SPKOAB	AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
IS4090	Walnut	M, D	—	AM/FM/FM Stereo/Phono/Tape	Note D2	—	—	169-579	CASS-R/P 969-62	A1, A2, A3, A4, SPKOAB	AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
L900P	Pecan	C, LL	3WR10X	AM/FM/FM Stereo/Phono/Tape	49-1153-02 49-1094-01	16 45	2-6x9 2-3½	169-573-01	8TK-P 969-60	A1, A2, SPK	AFC, AUX, DL, H, HIF, T, TO
LR902P	Pecan	C, LL	3WR11X	AM/FM/FM Stereo/Phono/Tape	49-1153-02 49-1094-01	16 45	2-6x9 2-3½	169-573-01	8TK-R/P 969-51	A1, A2, SPK	AFC, AUX, DL, H, HIF, RS, T, TO
LR902P1	Pecan	C, LL	3WR11X	AM/FM/FM Stereo/Phono/Tape	49-1153-02 49-1094-01	16 45	2-6x9 2-3½	169-573-01	8TK-R/P 969-51	A1, A2, SPK	AFC, AUX, DL, H, HIF, RS, T, TO
LR912AE	Antique Oak	C, LL	3WR11X	AM/FM/FM Stereo/Phono/Tape	49-1261-02 49-1251-02	8 8	2-8 2-3	169-581	8TK-R/P 969-51	A1, A2, SPK	A, AFC, AUX, DL, H, HIF, RS, T, TO
LR915P	Pecan	C, LL	3WR11X	AM/FM/FM Stereo/Phono/Tape	49-1261-02 49-1251-02	8 8	2-8 2-3	169-581	8TK-R/P 969-51	A1, A2, SPK	A, AFC, AUX, DL, H, HIF, RS, T, TO

PRODUCT FEATURES

SEE NOTES ON PAGE 5

• REFER TO PAGE ONE INDEX FOR MODELS IN THIS MANUAL •

CABINET			CHASSIS		SPEAKERS			RECORD CHANGER	OTHER FEATURES		
MODEL	COLOR	STYLE NOTE A	MODEL	TYPE	PART NUMBER	IMPED. (In Ohms)	QTY. AND SIZE (In Inches)	PART NUMBER NOTE B	TAPE PROVISION NOTE C	SPEAKER PROVISION NOTE D	MISC. NOTE E
LR915P1	Pecan	C, LL	3WR11X	AM/FM/FM Stereo/Phono/Tape	49-1261-02 49-1251-02	8 8	2-8 2-3	169-570	8TK-R/P 969-51	A1, A2, SPK	A, AFC AUX, DL, H, HIF, RS, T, TO
LR915P2	Pecan	C, LL	3WR11X	AM/FM/FM Stereo/Phono/Tape	49-1261-02 49-1251-02	8 8	2-8 2-3	169-570	8TK-R/P 969-51	A1, A2, SPK	A, AFC, AUX, DL, H, HIF, RS, T, TO
LR916PN	Pine	C, LL	3WR11X	AM/FM/FM Stereo/Phono/Tape	49-1261-02 49-1251-02	8 8	2-8 2-3	169-581	8TK-R/P 969-51	A1, A2, SPK	A, AFC, AUX, DL, H, HIF, RS, T, TO
LR916PN1	Pine	C, LL	3WR11X	AM/FM/FM Stereo/Phono/Tape	49-1261-02 49-1251-02	8 8	2-8 2-3	169-570	8TK-R/P 969-51	A1, A2, SPK	A, AFC, AUX, DL, H, HIF, RS, T, TO
LR917M	Pecan	C, LL	3WR11X	AM/FM/FM Stereo/Phono/Tape	49-1261-02 49-1251-02	8 8	2-8 2-3	169-581	8TK-R/P 969-51	A1, A2, SPK	A, AFC, AUX, DL, H, HIF, RS, T, TO
LR919P	Pecan	C, LL	3WR12X	AM/FM/FM Stereo/Phono/Tape	49-1261-02 49-1251-02	8 8	2-8 2-3	169-586	8TK-R/P 969-51	A1, A2, SPK	A, AFC, AUX, DL, H, HIF, RS, T, TO
LR919P1	Pecan	C, LL	3WR12X	AM/FM/FM Stereo/Phono/Tape	49-1261-02 49-1251-02	8 8	2-8 2-3	169-571	8TK-R/P 969-51	A1, A2, SPK	A, AFC, AUX, DL, H, HIF, RS, T, TO
LR920AE	Antique Oak	C, LL	3WR12X	AM/FM/FM Stereo/Phono/Tape	49-1217-01 49-1166-01	8 8	2-10 2-3½	169-586	8TK-R/P 969-51	A1, A2, SPK	A, AFC, AUX, DL, H, HIF, RS, T, TO
MC1000	Walnut	M, SP	—	—	49-1277 49-1278	8 8	1-6½ 1-2	—	—	20 Watt Handling Capability	A1
MC1000-11	Walnut	M, SP	—	—	49-1277 49-1278-02	8 8	1-6½ 1-2	—	—	20 Watt Handling Capability	A1
MC1000-12	Walnut	M, SP	—	—	49-1277 49-1278	8 8	1-6½ 1-2	—	—	20 Watt Handling Capability	A1
MC2000	Walnut	M, SP	—	—	49-1293 or 49-1261-02 49-1166-01	8 8 8	1-8 1-8 1-3½	—	—	40 Watt Handling Capability	A2
MC2000-11	Walnut	M, SP	—	—	49-1293 or 49-1261-02 49-1166-01	8 8 8	1-8 1-8 1-3½	—	—	40 Watt Handling Capability	A2
MC2000-12	Walnut	M, SP	—	—	49-1293 or 49-1261-02 49-1166-01	8 8 8	1-8 1-8 1-3½	—	—	40 Watt Handling Capability	A2
MC3000	Walnut	M, SP	—	—	49-1290 49-1288-01	8 8	1-10 1-3½	—	—	60 Watt Handling Capability	A3
MC3000-11	Walnut	M, SP	—	—	49-1290 49-1288-01	8 8	1-10 1-3½	—	—	60 Watt Handling Capability	A3
MC3000-12	Walnut	M, SP	—	—	49-1290 49-1288-01	8 8	1-10 1-3½	—	—	60 Watt Handling Capability	A3

PRODUCT FEATURES

SEE NOTES ON PAGE 5

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CABINET			CHASSIS		SPEAKERS			RECORD CHANGER	OTHER FEATURES		
MODEL	COLOR	STYLE NOTE A	MODEL	TYPE	PART NUMBER	IMPED. (In Ohms)	QTY. AND SIZE (In Inches)	PART NUMBER NOTE B	TAPE PROVISION NOTE C	SPEAKER PROVISION NOTE D	MISC. NOTE E
MC4000	Walnut	M, SP	—	—	49-1291 49-1289 49-1288-01	5.5 7.0 8.0	1-12 1-5 1-3½	—	—	100 Watt Handling Capability	A4
MC4000-11	Walnut	M, SP	—	—	49-1291 49-1289 49-1288-01	5.5 7.0 8.0	1-12 1-5 1-3½	—	—	100 Watt Handling Capability	A4
MC4000-12	Walnut	M, SP	—	—	49-1291 49-1289 49-1288-01	5.5 7.0 8.0	1-12 1-5 1-3½	—	—	100 Watt Handling Capability	A4
MC6020	Walnut	M	—	AM/FM/FM Stereo/Tape	Note D2	—	—	Note B3	8TK-R/P 969-54	A1, A2, SPKOAB	AFC, AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
MC6065	Walnut	M	—	AM/FM/FM Stereo/Tape	Note D2	—	—	Note B3	CASS-R/P 969-59	A1, A2, A3, A4, SPKOAB	AFC, AUX, DL, F, H, HIF, LD, LOF, MS, MU, T, TO
MC7031	Walnut	M	—	AM/FM/FM Stereo	Note D2	—	—	Note B3	TM	A2, A3, A4 SPKOAB	AFC, AUX, DE, DL, F, H, HIF, LD, LOF, MS, MU, TIO, TM, TS, TZ
MC7041	Walnut	M	—	AM/FM/FM Stereo	Note D2	—	—	Note B3	TM	A3, A4, SPKOAB	AFC, AUX, DE, DL, F, H, HIF, LD, LOF, MS, MU, TIO, TM, TS, TZ
MC7051	Walnut	M	—	AM/FM/FM Stereo	Note D2	—	—	Note B3	TM	A3, A4, SPKOAB	AUX, DE, DL, F, H, HIF, LD, LOF, MS, MU, 2TIO, TD, TM, TS, TZ
MC9020	Walnut	M, D	—	—	—	—	—	169-574	—	—	—
MC9025	Walnut	M, D	—	—	—	—	—	169-579	—	—	—
MC9030	Walnut	M, D	—	—	—	—	—	169-575	—	—	—
MC9035	Walnut	M, D	—	—	—	—	—	169-580	—	—	—
MC9040	Walnut	M, D	—	—	—	—	—	169-576	—	—	—
MC9050	Walnut	M, D	—	—	—	—	—	—	—	—	—
MC9070	Walnut	M	—	Tape	—	—	—	—	CASS-R/P 969-58	—	H
MC9070-1	Walnut	M	—	Tape	—	—	—	—	CASS-R/P 969-63	—	H
SL2597P9	Pecan	C, 2LL	3WR12X	AM/FM/FM Stereo/Phono/Tape/Color Combo	49-1276 49-1234-04 49-1166	8 16 8	2-10 1-5 2-H	169-585	8TK-R/P 969-51	A2, A3, A4, SPK	A, AFC, AUX, DL, H, HIF, T, TO

PRODUCT FEATURES

NOTES

NOTE A – CABINET STYLE:

C = Console, D = Dust Cover, M = Modular, LL - Lift Lid, 2LL - Two Lift Lids, SP = Speaker System.

NOTE B – RECORD CHANGERS

NOTE B1: Provision for external record changer using a ceramic cartridge.

NOTE B2: Provision for external record changer using a magnetic cartridge.

NOTE B3: Provision for external record changer using either a ceramic or magnetic cartridge.

Record Changers having alpha suffixes (i.e. 169-511A) denote variations of internal mechanical and/or electrical components (refer to Record Changer Features charts) but otherwise are interchangeable with other alpha suffix and non-suffix versions.

NOTE C – TAPE INPUT AND OUTPUT PROVISIONS:

Factory Installed: 8 TK - Eight Track Cartridge.

Cass = Cassette, P = Play, R = Record.

TM = Top of Set Model for installation with the designated console or modular models:

Model MC9070 — Cassette Tape Player/Recorder.

Tape Units having alpha suffixes (i.e. 169-510A) denote variations of internal mechanical and/or electrical components (refer to Tape Unit Features chart) but are otherwise interchangeable with other alpha suffix and non-suffix versions. Units having numeric (i.e. 169-506-01) or numeric/alpha (i.e. 169-506-01A) suffixes may have a one way interchangeability under some conditions (refer to Product Features chart).

NOTE D – SPEAKER PROVISIONS:

NOTE D1: Models E9012 series, G1000W, G2000W, W11, G3000W, W11, G9012W1, G9014W, G9019W, H1000W series, H2000W series, H3000W series, J1000W series, J2000W series and J3000W series are 8 ohm Allegro Speaker Systems. Allegro Models in the E9014 and E9018 series were 16 ohm systems.

NOTE D2: "K" and "L" Models may use either MC1000, MC2000, MC3000 or MC4000 8 ohm Allegro Speaker Systems as indicated. (See Speaker Provisions).

A1 = Model MC1000 Allegro 1000 Speaker System may be used.

A2 = Model MC2000 Allegro 2000 Speaker System may be used.

A3 = Model MC3000 Allegro 3000 Speaker System may be used.

A4 = Model MC4000 Allegro 4000 Speaker System may be used.

SPK = Switch to select Internal (Main), External (Remote) or Both Speaker Systems.

SPKAB = Switch to select A, B or Both Speaker Systems.

SPKOAB = Switch to select A, B or Both Speaker Systems or to switch all Speaker Systems off.

NOTE E – MISCELLANEOUS FEATURES:

A = Speaker System is Allegro.

A1 = Speaker System is Allegro 1000.

A2 = Speaker System is Allegro 2000.

A3 = Speaker System is Allegro 3000.

A4 = Speaker System is Allegro 4000.

AFC = AFC Defeat Switch.

AUX = Auxiliary input accepts certain optional Record Changers or Tape Units listed under Notes B and C.

DE = Deemphasis Switch.

DL = Dial Scale Light.

F = Flywheel Tuning.

H = Headphone Jack (Stereo).

HIF = Hi Filter Switch.

LD = Loudness Switch.

LOF = Lo Filter Switch.

MS = Mono/Stereo Switch.

MU = FM Mute Switch.

PL = Power Indicator Light (other than Dial Scale Light).

RS = Record Storage.

T = Tuning Meter.

TD = Tape Dubbing Switch.

TIO = Tape Input/Output.

TM = Tape Monitor Switch.

TO = Tape Output.

TS = Signal Strength Meter (AM and FM).

TZ = Zero Center Tuning Meter (FM).

RECORD CHANGER FEATURES

SEE NOTES BELOW

PART NUMBER	MFG. CODE	CART- RIDGE STYLUS NOTE 2 ----- PRESSURE IN GRAMS	45 RPM ADAPTER NOTE 4	MODES (TYPE)	SIZE (TYPE)	SPEED (TYPE)	RECORD STACK	TURN- TABLE DIA.	BASE PLATE COLOR	TURN- TABLE PAD COLOR	PRES- SURE ARM COLOR	MISC. (TYPE)
169-570	GAR 6200C	142-199 56-643 0.7D-3.0S 3.0-5.0	A-7545 or 76-2132	Off, Manual, Auto (Slide)	12", 33 7", 33 7", 45 10", 78 (Slide)		Note 5	10½" Metal	Black	Black	Chrome and Black	Cue (Lever)
169-571	GAR 630S	142-192 56-643 0.7D-3.0S 3.0-5.0	A-7545 or 76-2132	Off, Manual, Auto (Slide)	12", 33 7", 33 7", 45 10", 78 (Slide)		Note 5	10½" Metal	Black	Black	Chrome and Black	Viscous Cue (Lever) ----- Anti-Skate (Slide) Cue (Lever)
169-573	BSR C197	142-197 56-639 0.7D-3.0S 3.5-5.0	S-72648, A-6616 or A-8352	Off, Manual, Auto (Slide)	7,10,12 (Slide)	33,45,78 (Slide)	Note 5	11" Metal	Black	Black	Black	Cue (Lever)
169-573-01	BSR C197	142-198 56-642 0.7D-3.0S 3.5-5.0	S-72648, A-6616, or 27-628	Off, On, Auto (Slide)	7,10,12 (Slide)	33,45,78 (Slide)	Note 5	11" Metal	Black	Black	Black	Cue (Lever)
169-574	GAR 630S	142-194 56-641 0.6D 3.5-5.0	A-7545 or 76-2132	Off, Manual, Auto (Slide)	12", 33 7", 33 7", 45 10", 78 (Slide)		Note 5	10½" Metal	Black	Black	Chrome and Black	Viscous Cue (Lever) ----- Anti-Skate (Slide)
169-574-01	GAR 630S	142-189 56-641 0.6D 3.5-5.0	A-7545 or 76-2132	Off, Manual, Auto (Slide)	12", 33 7", 33 7", 45 10", 78 (Slide)		Note 5	10½" Metal	Black	Black	Chrome and Black	Viscous Cue (Lever) ----- Anti-Skate (Slide)
169-575	GAR GT4	142-195 56-641-02 0.4X0.7D 2.5-4.5	27-627 or 76-2132	Off, Manual, Auto, Repeat (Slide)	N.A.	33, 45 (Slide)	Note 5	11¼" Metal ----- (Belt Drive)	N.A.	Black	N.A.	Viscous Cue (Slide) ----- Anti-Skate (Rotary) ----- Start/Reject (Button)
169-575-01	GAR GT4	142-189 56-641 0.6D 2.5-4.5	27-627 or 76-2132	Off, Manual, Auto-Repeat (Slide)	N.A.	33, 45 (Slide)	Note 5	11¼" Metal ----- (Belt Drive)	N.A.	Black	N.A.	Viscous Cue (Slide) ----- Anti-Skate (Rotary) ----- Start/Reject (Button)
169-576	GAR GT25	142-196 56-641-03 0.4X0.7D 1.5-3.0	27-627 or 76-2132	Off, Manual, Automatic, Repeat (Rotary)	7, 12 (Rotary)	33, 45 (Rotary)	Note 5	11¼" Metal ----- (Belt Drive)	Gray	Black	N.A.	Viscous Cue (Slide) ----- Anti-Skate (Rotary) ----- Start/Reject (Rotary)
169-579	TENVA MT30	142-200 56-641-04 0.6D 2.0-4.0	76-2132	Program Off, Manual, 1 Through 6 (Slide) ----- Play (Button)	N.A.	33, 45 (Slide)	Note 5	11" Aluminum Metal	Black	Black	N.A.	Damped Cue (Lever) ----- Anti-Skate (Rotary) ----- Belt Drive ----- 24 Pole Motor
169-580	TENVA MT60	142-195 56-641-02 0.4X0.7D 2.0-4.0		Program Off, Manual, 1 Through 6 (Slide) ----- Play (Button)	N.A.	33, 45 (Slide) Pitch Control (Rotary)	Note 5	11" Aluminum Metal	Black	Black	N.A.	Damped Cue (Lever) ----- Anti-Skate (Rotary) ----- Belt Drive ----- Electronic Drive And Speed Control ----- 24 Pole Motor Strobe Indicator
169-581	BSR C198	142-190 56-643 0.7D-3.0S 3.0-5.0	A-6616 or 27-628	Off, On, Auto	7,10,12 (Slide)	33,45,78 (Slide)	Note 5	10½" Plastic	Black	Black	Black	Cue (Lever) ----- Anti-Skate (Rotary) ----- 2 Pole Motor
169-585	TENVA MT30	142-201 56-647 0.7DX3.0S 3.0-5.0		Program Off, Manual, 1 Through 6 (Slide) ----- Play (Button)	N.A.	33, 45 (Slide)	Note 5	11" Aluminum Metal	Black	Black	N.A.	Damped Cue (Lever) ----- Anti-Skate (Rotary) ----- Belt Drive ----- 24 Pole Motor
169-586	BSR C218	142-202 56-647 0.7D-3.0S 3.0-5.5	27-628	Off, On, Auto	7,10,12 (Slide)	33,45 (Slide)	Note 5	10½" Plastic	Black	Black	Black	Cue (Lever) ----- Anti-Skate (Rotary) ----- Belt Drive ----- 4 Pole Motor

NOTE 1 — All record changers have 120VAC 60Hz motors.

NOTE 2 — D = Diamond, S = Manufactured Sapphire.

NOTE 3 — Stylus 56-641, has a 0.6 mil spherical tip. 56-641-01 is an optional 2.5 mil mfg sapphire stylus for playing 78 RPM records. 56-641-02 and 56-641-03 are Bi-radial Elliptical stylus.

NOTE 4 — Adapter 27-628 is a disc type and 76-2132 is a stub type. Adapter used will vary with model.

NOTE 5 — Record changers will play as many as five (flat and unwarped records in 12-inch, 10-inch or 7-inch size. Sizes cannot be intermixed.)

NOTE 6 — Record changers will play as many as six (flat and unwarped records in 12-inch, 10-inch or 7-inch size. Sizes cannot be intermixed.)

TAPE UNIT FEATURES

SEE NOTES BELOW

PART NO. NOTE F	MFG. CODE	8-TRACK/ CASSETTE	CHANNELS		ALC/FULL FEATURE NOTE A	MOTOR NOTE B	AUTO STOP NOTE C	USE NOTE D	MISC. FEATURES NOTE E
			PLAY	RECORD					
169-506-01A	AMI/ML	8-Track	2	2	Full	DC/M	Full	C	A2, C1, FF, I, M, P1, R
169-545	AMI/ML	8-Track	2	2	ALC	DC/M	Four R	C	A2, C3, I, R
169-546	AMI/ML	8-Track	2	2	ALC	DC/M	Four R/FFA	C	A2, C3, FF, I, P2, R
969-51	TAN	8-Track	2	2	ALC Full	DC/M	Four R, Four R/FF	C, M	A3, C3, FF, I, P2, R, RL
969-52	TAN	Cassette	2	2	ALC	DC/E	Tape P/R	M	A3, C4, CR, E, F, I, P2, RL, TC
969-54	TAN	8-Track	2	2	Full	DC/M	Four B P/R/FF	M	A3, C3, FF, I, M, P2, R, RL
969-55	TAN	8-Track	2	2	Full	DC/M	Four R/FF	M	A3, C3, FF, I, M, P2, RL, RP
969-56	TAN	Cassette	2	2	Full	DC/E	Tape P/R	M	A3, C4, CR, E, F, I, M, P2, RL, TB, TC, TE
969-57	TAN	Cassette	2	2	Full	DC/E	Tape P/R	M	A3, C3, E, F, I, M, P2, RL, T, TB, TC, TE
969-58	AMI	Cassette	2	2	Full	DC/E	Tape All	MA	A1, C1, D, E, I, M, P2, PRL, RL, TB3, TC, TE3
969-59	VOR	Cassette	2	2	Full	DC/E	Tape P/R	M	A3, C3, CR, D, E, F, I, M, P2, RL, T, TB/TE, TC
969-60	TAN	8-Track	2	—	—	DC/M	—	C	A2, C3
969-61	VOR	Cassette	2	2	Full	DC/E	Tape P/R	M	A3, C3, E, F, I, M, P2, RL, T, TB, TC, TE
969-62	AMI	Cassette	2	2	Full	DC/E	Tape P/R	M	A3, C3, CR, D, E, F, I, M, P2, RL, TB/TE, TC
969-63	AMI	Cassette	2	2	Full	DC/E	Tape All	MA	A1, C1, D, E, I, M, P2, PRL, RL, TB3, TC, TE3
A-7021	TAN	8-Track	2	2	Full	DC/M	Four R/FF	M	A2, C3, FF, I, M, P2, RL, PP
A-8051	TAN	Cassette	2	2	Full	DC/E	Tape P/R	M	A2, C4, CR, E, F, I, M, P2, RL, TB, TC, TE

NOTES

NOTE A — RECORD

ALC = Automatic Level Control

Full = Full Feature with Record Level Controls and Meters.

NOTE B — MOTOR

E = Electronic Governor

M = Mechanical Governor

AC Motors require conversion kit if used on 50Hz.

NOTE C — AUTO STOP

Full = Stops after each program, fourth program or runs continuously (in both Play and Record modes). Selected by three position slide control.

Four R = Stops after fourth program in Record only.

Four R/FF = Stops after fourth program in Record and Fast Forward only.

Four R/FFA = Stops after fourth program in Record and after all programs in Fast Forward.

Four B P/R/FF = Stops after fourth program in Play, Record and Fast Forward only if Auto Stop Button is depressed.

Tape P/R = Tape tension sensor at end of tape in Play and Record only.

Tape All = Stops at end of tape in Play/Record/Fast Forward/Rewind modes.

NOTE D — USED IN

C = Console

M = Modular

MA = Modular Accessory

W = Wedge Modular

NOTE E — MISC. FEATURES

A1 = Parallel Blade Power Connector.

A2 = Molex Type Power Connector.

A3 = Hard Wire Power Connector.

B = Bias Frequency Switch.

C1 = RCA Type Audio Connector.

C2 = Spade Lub Audio Connector.

C3 = Hard Wire Audio Connector.

C4 = Molex Type Audio Connector.

CR = Cue/Review.

D = Dolby Noise Reduction System. Dolby is a trademark of Dolby Laboratories, Inc.

E = Eject.

F = Interlocked Fast Forward Button.

FF = Fast Forward Button (Push-Push Type).

I = Interlocked Record Button.

M = Record Level Meter (Illuminated).

P1 = Pause Button (Push In, Slide Left to Lock).

P2 = Pause Button (Push-Push).

PRL = Peak Record Light.

Q = Automatic 2/4 Channel Switching, with mode indicator.

R = Ready Light or Auto Stop Light.

RL = Record Light.

RP = Repeat Button.

T = Tape Run Light.

TB = Tape Bias Switch (C_rO₂/Normal).

TB3 = Tape Bias Switch (C_rO₂/FeC_r/Fe₃O₂).

TC = Tape Counter.

TE = Tape Equalization Switch (C_rO₂/Normal).

TE3 = Tape Equalization Switch (High, Mid, Low).

NOTE F — PART NUMBERS

169- Base numbers identify units with electronics while 969- and A-base numbers identify units without electronics (mechanism only). Features listed in Notes "A", "C" and "E" for 969- and A- base numbers include features which may vary with model application.

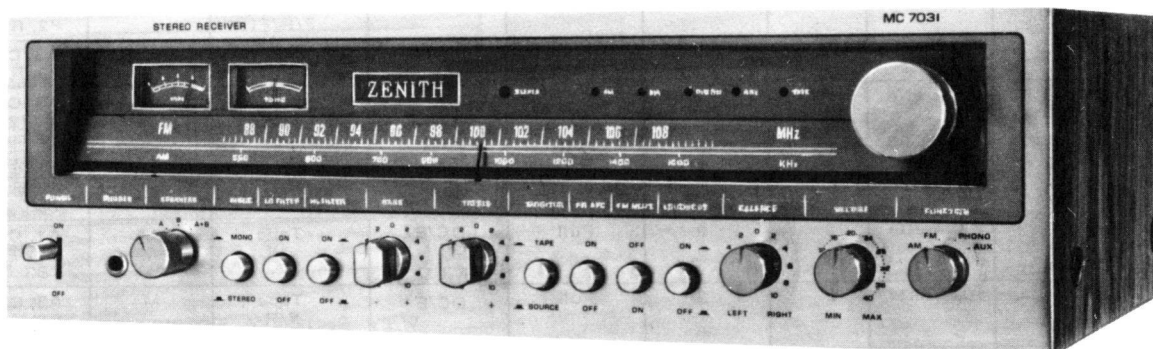
INTRODUCTION

This service manual contains detailed service information for all sections of Models MC7031, MC7041 and MC7051.

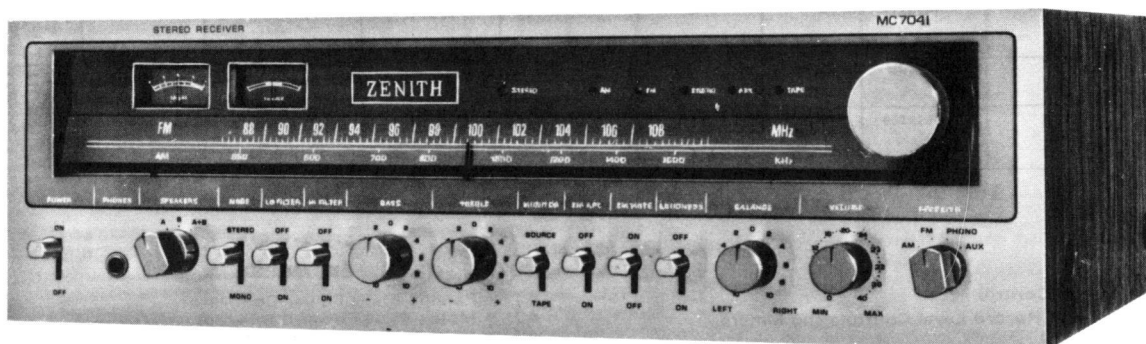
Illustrations of the three models covered in this service manual appear below. As will be noted from the illustrations, styling is

common among the three.

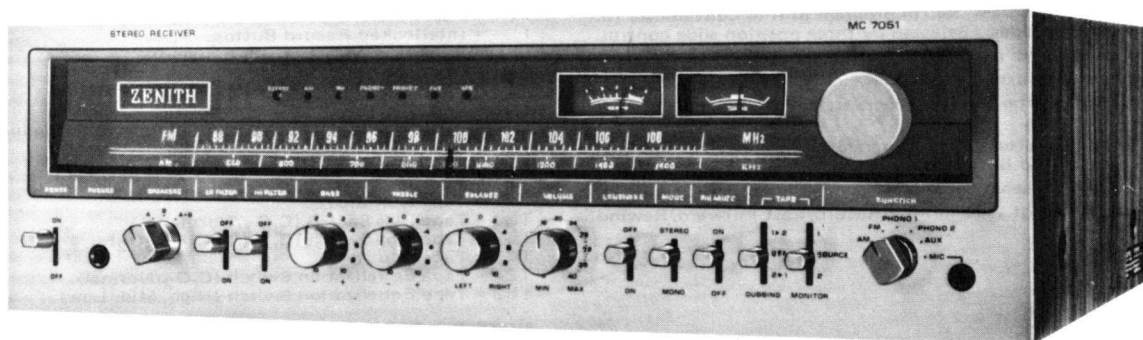
On the following pages are Feature Charts and Specifications of the three models.



MODEL MC7031



MODEL MC7041



MODEL MC7051

PRODUCT FEATURES									
X OR LETTER DENOTES FEATURE INCLUDED AND NUMBER DENOTES QUANTITY: D = ROTARY DETENT ACTION (CENTER DETENT ON BALANCE CONTROL), F = ROTARY FLYWHEEL, K = KEYBOARD TYPE, P = PUSH BUTTON TYPE, R = ROTARY TYPE, S = SLIDE TYPE, T = TOGGLE TYPE									
FEATURES	MODEL NUMBER	MC7031	MC7041	MC7051	FEATURES	MODEL NUMBER	MC7031	MC7041	MC7051
	PRODUCT TYPE	AM/FM	AM/FM	AM/FM		PRODUCT TYPE	AM/FM	AM/FM	AM/FM
POWER OUTPUT (Min. R.M.S. per Channel)		15W	25W	40W	TUNER/AMPLIFIER CONNECTORS				
T.H.D. NO MORE THAN		0.1%	0.08%	0.05%	TAPE INPUT				
BANDWIDTH OF		20 Hz —	20 Hz —	20 Hz —	TAPE OUTPUT				
INTO AN 8 OHM LOAD		20 kHz	20 kHz	20 kHz	PHONO IN — CERAMIC				
TUNER/AMPLIFIER CONTROLS					PHONO IN — MAGNETIC				
VOLUME		D	D	D	AUXILIARY INPUT				
BALANCE		D	D	D	SPEAKER OUTPUT —				
TREBLE		D	D	D	PUSH TYPE (Pair)				
BASS		D	D	D	HEADPHONE (STEREO)				
TUNING		F	F	F	EXTERNAL ANTENNA				
TUNER/AMPLIFIER SWITCHES					FM — 300 OHM BALANCED				
POWER		T	T	T	FM — 75 OHM UNBALANCED				
LOUDNESS		P	T	T	AM				
HI FILTER		P	T	T	AC OUTLETS — UNSWITCHED				
LO FILTER		P	T	T	SWITCHED				
SPEAKER					PHONO GROUND TERMINAL				
OFF, A, B or A+B		R	R	R	MICROPHONE INPUT				
MONO/STEREO		P	T	T	TUNER/AMPLIFIER FEATURES				
FM MUTE		P	T	T	FM STEREO INDICATOR LIGHT				
FM AFC		P	T	—	FUNCTION INDICATOR LIGHTS				
FM DE-EMPHASIS (on back)		S	S	S	TUNING METER (ILLUMINATED)				
TAPE MONITOR		P	T	T	CENTER READING FM				
TAPE DUBBING		—	—	T	SIGNAL STRENGTH METER				
BANDSWITCH — POSITIONS		4	4	6	FM/AM (ILLUMINATED)				
AM		R	R	R	SPEAKER PROTECTION FUSES				
FM		R	R	R	SPEAKER PROTECTION CIRCUIT				
PHONO		R	R	2R					
AUXILIARY INPUT		R	R	R					
MICROPHONE		—	—	R					

GENERAL INFORMATION

THEORY

From time to time Zenith includes the use of new components and circuit applications in product design. Theory and explanation of such components and circuits is included in various manuals. Refer to inside front cover for further information.

CIRCUIT BOARD COMPONENT IDENTIFICATION

In order to assist the Service Technician, most circuit boards are marked to identify the location of components, test points, etc., using the schematic reference symbols and numbers. We have also prepared a drawing of the foil side of the circuit board showing the relationship between the components and the foil. This will aid the Technician in quickly tracing circuits, as not only are the components shown, but also the voltages at various check points. Components are identified by a letter/number combination. A letter prefix to indicate the type of component: C=Capacitor, L=Coil, R=Resistor, CR=Diode, etc. The numbers are assigned, in blocks, to identify the circuit in which it is used:

Block	Stage	Example
1 - 99	FM Tuner	R1, C1, L1.
101 - 199	AM Tuner	R101, C101, L101.
201 - 299	IF	R201, C201, L201.
301 - 399	Multiplex	R301, C301, L301.
401 - 449	Main Preamp, Right Channel	R401, C401, L401.
451 - 499	Main Preamp, Left Channel	R451, C451, L451.
501 - 599	Power Supply	R501, C501, L501.
901 - 949	Phono Preamp, Right Channel	R901, C901, L901.
951 - 999	Phono Preamp, Left Channel	R951, C951, L951.
1401 - 1449	Power Amp, Right Channel	R1401, C1401, L1401.
1451 - 1499	Power Amp, Left Channel	R1451, C1451, L1451.

When servicing these products, the Service Technician must consider the following:

- One integrated circuit is used for both channels of the power output stages.
- Should a power output stage fail;
 - Check for shorts between the integrated circuit outputs (pins 5 and 11) and other pins.
 - Check voltages at the IC pins.
 - Check for defective components external to the IC, including in the power supply.
- Replace the power output IC in the following manner.
 - A replacement power output IC normally has a kink in each pin. This is the point at which the pins are to be bent when required to fit the circuit board.
 - Bend the pins at right angles at the kink in each pin.

CAUTION — Do not flex leads as this may cause internal damage to the IC.

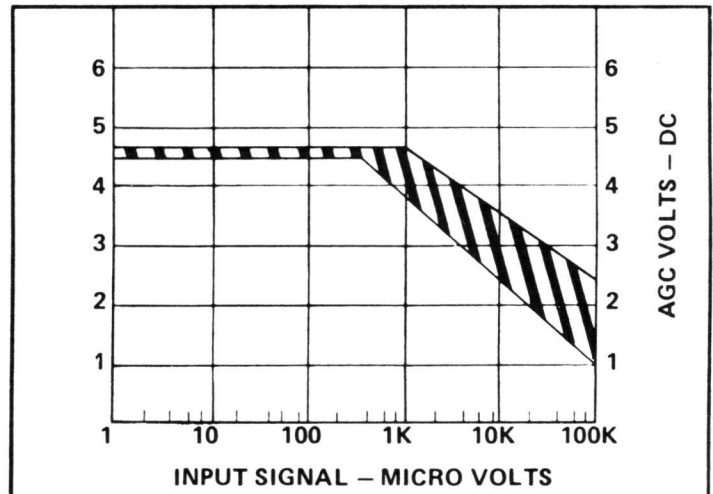
- Remove the old IC and be certain that the holes in the circuit board are free of solder.
 - Apply a heat conductive grease to the metal heat sink surface against which the metal plate of the IC will be placed. This grease can be obtained in quantities by ordering Part No. 205-303.
 - Insert IC pins into correct holes in the circuit board.
 - Insert a screw through each of the IC's mounting holes. Tighten the screws until they are snug. **CAUTION** — Do not overtighten these screws as too much force may cause internal damage to the IC.
 - Solder all leads, being certain that solder does not bridge to other pins, causing shorts which may damage the IC or external components.
- Do not operate these amplifiers without their proper speaker load.
 - Do not short out the audio output of either channel when the amplifier is operating.

FM AGC VOLTAGE CURVE

Voltage developed at the AGC terminal of the IF IC (pin 15) varies depending on the IF voltage sampled in the chip. If a fixed input signal level were applied to several samples of a given chassis model, the measured AGC voltage for that input level will vary among the samples. Voltage measured under these conditions is not a complete indicator of proper AGC action.

Two important points must be noted:

- General shape of the voltage curve (when the voltages are plotted for a curve).
- AGC voltage will start to drop as the RF input level increases to approximately 1000 microvolts.



MINIMUM RATED POWER OUTPUT PER CHANNEL INTO 8 OHMS (SINE WAVE CONTINUOUS AVERAGE POWER — OFTEN CALLED RMS POWER)

MODELS	NUMBER OF CHANNELS	WATTS PER CHANNEL	POWER BANDWIDTH	TOTAL HARMONIC DISTORTION (THD) NO MORE THAN
MC7031	2	15	20 Hz—20 KHz	0.1%
MC7041	2	25	20 Hz—20 KHz	0.08%
MC7051	2	40	20 Hz—20 KHz	0.05%

AM/FM/MULTIPLEX ALIGNMENT

GENERAL

These receivers have been aligned at the factory and normally will not require further adjustment. As a result, it is not recommended that any attempt be made to alter the stages. If any components are replaced or if anyone tampers with the adjustments, realignment may be necessary.

AM ALIGNMENT

It is recommended that AM IF's be aligned by the sweep method shown in the alignment procedure on the following pages. If your signal generator does not have sweep capabilities for the AM IF, use the alternate alignment procedure shown.

FM ALIGNMENT

Because of the wide band pass required in a FM Multiplex tuner, it is desirable to use an FM signal generator having a deviation of 250kHz as well as an oscilloscope, when aligning both the FM IF and RF portions of this receiver. It is not only necessary to obtain maximum amplitude in the IF amplifier stages, but also necessary to maintain symmetry. It is desirable to use markers in obtaining IF curve symmetry.

Capacitors mentioned in the alignment procedure should be as small in size as possible and the ground lead of the generator must be connected to ground as close as possible to the point of injection.

MULTIPLEX ALIGNMENT

Before any attempt is made to align, or service, FM Multiplex circuitry, the technician must be certain that the RF, IF, and Detector alignment is correct, and that the receiver functions normally on monaural signals.

Most Multiplex generators are excellent troubleshooting devices because they provide a composite Multiplex signal as well as an RF signal (which is FM modulated by the composite multiplex signal). The composite signal is very useful since it can be used in signal tracing the Multiplex portion of the

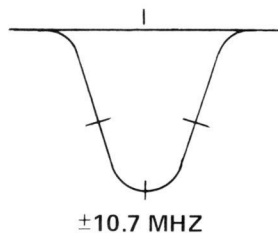
receiver. We do not recommend that Multiplex alignment be made using the composite signal injected at the output terminal of the Detector since there is always some phase shift occurring in the RF, IF or Detector circuits. As a result, Multiplex alignment made by a signal injected at the Detector input would not be correct. For proper Multiplex alignment, the composite signal must FM modulate the RF carrier and then be fed into the FM antenna terminals. With the signal injected in this manner, the Multiplex alignment would then be the best that could possibly be obtained.

RF signals should be injected at a point in the FM band where no signal is present. If at all possible, this should be at a frequency near the middle of the FM band. Tune the FM receiver to this point and adjust the RF frequency adjustment on the generator to this same frequency. The AGC voltage developed in the receiver should be maximum. The AGC voltage substantially less than this may indicate the RF frequency is tuned to an image.

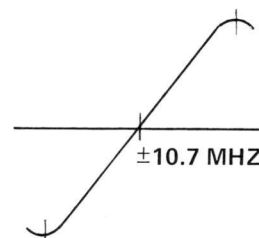
GENERAL TROUBLE-SHOOTING PROCEDURE

Should a problem arise in aligning the FM Multiplex portion of the receiver, the technician must determine whether the difficulty lies in the RF, IF, and Detector portions of the receiver, or whether the difficulty lies in the Multiplex portion. The composite output of the multiplex generator can be injected at the output of the Detector to help determine the area of difficulty. To reduce possible extraneous signals coming through a Detector, short the Detector primary with a jumper lead. The wave forms and their magnitude may vary slightly from chassis to chassis, however, they are quite indicative of what will be seen when signal tracing the Multiplex circuitry.

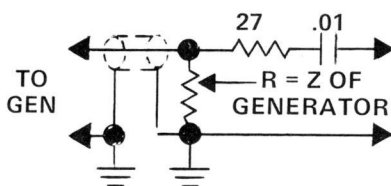
If all the waveforms are similar in form and magnitude to those indicated, it can be assumed that the Multiplex portion of the receiver is functioning properly and the problem lies ahead of this in the FM receiver. If any of the waveforms are missing at a latter point but are apparent at a previous point, circuitry between the two test points should be checked.



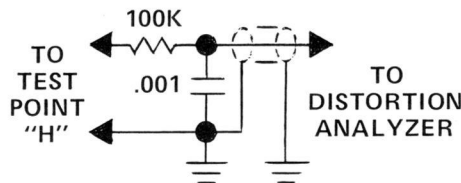
SCOPE PATTERN "A"



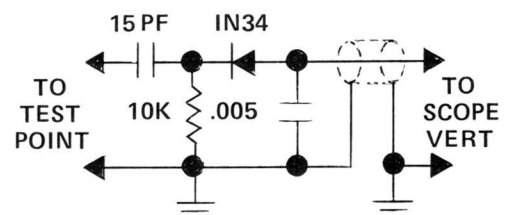
SCOPE PATTERN "B"



PROBE "A" - RF INPUT



PROBE "B" - DE-EMPHASIS



PROBE "C" - DETECTOR PROBE

RF, IF, MPX AND AUDIO ALIGNMENT PROCEDURE FOR MODELS MC7031, MC7041

STEP	CONNECT GENERATOR TO	DUMMY ANTENNA	CONNECT VTVM/ SCOPE TO	INPUT SIGNAL FREQ.	SET DIAL TO	ADJUST	PURPOSE		
AUDIO OUTPUT IDLE CURRENT ADJUSTMENT CAUTION: Be Certain That The Output Stages Have Been Adjusted For Proper Idle Current Under No Signal Input Conditions Before Performing Other Adjustments Or Alignment.									
1	—	—	VTVM Across R1422	No Signal Input	—	R1412	Adjust Controls For 4mV Across Corresponding Resistors. This Would Be Approximately 15mA.		
2			Across R1472			R1462			
AM ALIGNMENT – PREFERRED METHOD – WITH AM SWEEP GENERATOR NOTE: For AM IF Alignment Use AM Sweep Signal Generator Of 10 KHz Deviation, 60 Hz Modulation For Full Bandpass Display. Bandswitch In AM. Also Connect Modulation Frequency To Scope Horizontal. (If AM Sweep Not Available, See Steps 17 Through 31.)									
3	Short Test Point "L" (AM Gang Antenna Section) To Chassis Ground.								
4	Test Point "K" AM IF Input	Generator Output Probe "A"	Scope Detector Output Across R123, Term. #104	± 455 KHz	Gang Closed	—	Adjust Generator To Center Frequency Of Ceramic Filter.		
5				Tune Generator To Center Total Bandpass Waveform. Do Not Change Generator Frequency For Remainder Of AM IF Alignment.					
6				Center Freq. Of Ceramic Filter In T102	Gang Closed	L104, L105 (T102)		Adjust For Maximum Gain And Symmetry.	
7						T103			Adjust For Maximum.
8						T104			
9				Repeat Steps 6, 7 & 8 For Minimum Change.					
10	Remove Short Between Test Point "L" And Chassis Ground.								
11	One Turn Loosely Coupled To AM Wavemagnet Antenna	None	Scope Detector Output Across R123, Term. #104	1400 KHz	1400 KHz	C1K	Set Oscillator To Dial Scale.		
12				600 KHz	600 KHz	T101			
13				Repeat Steps 11 & 12 For Minimum Change.					
14				1400 KHz	1400 KHz	C1G	Align Antenna Stage.		
15				600 KHz	600 KHz	L111 If Necessary			
16				Repeat Steps 14 & 15 For Minimum Change.					
AM ALIGNMENT – ALTERNATE METHOD – IF AM SWEEP GENERATOR IS NOT AVAILABLE NOTE: For AM IF Alignment Use A Signal With 400 Hertz Modulation. Bandswitch in AM.									
17	Short Test Point "L" (AM Gang Antenna Section) To Chassis Ground.								
18	Test Point "K" AM IF Input	Generator Output Probe "A"	VTVM Detector Output Across R123, Term. #104	± 455 KHz	Gang Closed		Adjust For Maximum.		
19				Rock Generator While Adjusting L104 (T102 Primary) For Maximum.					
20				Rock Generator While Adjusting L105 (T102 Secondary) For Maximum.					
21				Repeat Steps 19 & 20 For Minimum Change.					
22				Equal Output Should Be Found If Generator Is Detuned Equal Frequency Each Side Maximum.					
23				Center Freq. Of Ceramic Filter In T102	Gang Closed	T103			
24						T104			
25				Remove Short Between Test Point "L" And Chassis Ground.					
26	One Turn Loosely Coupled To AM Wavemagnet Antenna	None	VTVM Detector Output Across R123, Term. #104	1400 KHz	1400 KHz	C1K	Set Oscillator To Dial Scale.		
27				600 KHz	600 KHz	T101			
28				Repeat Steps 26 & 27 For Minimum Change.					
29				1400 KHz	1400 KHz	C1G	Align Antenna Stage.		
30				600 KHz	600 KHz	L111 If Necessary			
31				Repeat Steps 29 & 30 For Minimum Change.					
FM ALIGNMENT NOTE: For FM IF Alignment Use A Signal Of 250 KHz Deviation, 50 Hertz Modulation For Full Bandpass Display. Bandswitch In FM. Mute OFF. AFC OFF. Preset R208, R211, R303 And R313 To Mid Rotation Before Connecting Generator. Connect Generator Cable Ground To Gang Frame.									
32	Shunt C1D To Ground With A .001 MF Capacitor.								
33	Test Point "D" FM IF Input At Q2 Base	Generator Output Probe "A"	Scope Detector Probe "C" Test Point "G" At IC201 Pin 1	± 10.7 MHz	Gang Closed	—	Align I.F. Transformer For Maximum Output And Symmetry As Indicated In Scope Pattern "A".		
34				Tune Generator To Center Total Bandpass Waveform. Do Not Change Generator Frequency For Remainder Of FM IF Alignment.					
35				Center Freq. Of Ceramic Filters Y201, Y202, Y203.	Gang Closed	T201			

RF, IF, MPX AND AUDIO ALIGNMENT PROCEDURE FOR MODELS MC7031, MC7041 – Cont'd.

STEP	CONNECT GENERATOR TO	DUMMY ANTENNA	CONNECT VTVM/ SCOPE TO	INPUT SIGNAL FREQ.	SET DIAL TO	ADJUST	PURPOSE
36	Test Point "A" ----- FM Antenna Post (Disconnect Antenna)	300 Ohm	—	±98 MHz	98 MHz	R211 (Mute)	Adjust For No Sound Output When Input Is Below 1.7 μV With Mute Switch ON.
37						R208 (Meter)	Adjust For A Reading Of 6 On Meter M102 With 60 dbV (1mV) Input.
NOTE: For FM Detector Alignment Use A Signal Of 75 KHz Deviation, 1 KHz Modulation. Also Connect Generator Modulation Frequency To Scope Horizontal. Adjust Generator IF Frequency To Center Total Bandpass Waveform. Do Not Change Generator IF Frequency For Remainder Of IF Alignment. (If Your Generator Does Not Provide Output For Audio Modulation Frequency Use Horizontal Output From Generator, Or Scope Horizontal Sweep, And Follow Step 38C.) Minimum Distortion Can Only Be Achieved By Use Of Step 38A Below.							
38	Test Point "D" ----- FM IF Input At Q2 Base	Generator Output Probe "A"	A. Distortion Analyzer (Thru a 100 Usec De-emphasis Network Probe "B" And Scope. B. Scope C. Scope	Center Frequency Of Ceramic Filters Y201, Y202, Y203.	Gang Closed	L205, L206 (T202)	A. Preferred Method: Distortion Analyzer At Test Point "H" Should Read Minimum Distortion. B. Alternate Method: Adjust For Linear Scope Trace - No Curve At Ends Of Trace. Disregard Meter Reading. C. Alternate Method: Adjust For Maximum Length And Symmetry, Similar To Scope Pattern "B".
39			Test Point "H"			L205 (T202)	Adjust For Center Reading On Tuning Meter M101.
40	Test Point "A" ----- FM Antenna Post (Disconnect Antenna)	300 Ohm	—	106 MHz	106 MHz	C1E	Set Oscillator To Dial Scale.
41				90 MHz	90 MHz	L4	
42				Repeat Steps 40 & 41 For Minimum Change.			
43				106 MHz	106 MHz	C1C	Align FM Detector Stage For Maximum.
44				90 MHz	90 MHz	L2 If Necessary	
45				106 MHz	106 MHz	C1A	Align FM Antenna Stage For Maximum.
46				90 MHz	90 MHz	L1	
47				Repeat Steps 43 Thru 46 For Minimum Change.			
NOTE: Apply Sufficient Signal Level — Approx. 100 Microvolts — To Obtain Full Limiting At Point Near 98 MHz.							
48	—	—	Frequency Counter And/or Scope ----- Test Point "M"	Unmodulated RF Carrier	—	R303 (VCO)	A. Frequency Counter Should Read 19 KHz, ± 100 Hz. B. Alternate Method: Connect Test Point "M" Signal To Scope Vertical And An Accurate 19 KHz Signal To Scope Horizontal Input. Adjust For One Square Synchronized Waveform
49			Scope And/Or AC VTVM ----- Left Tape Output	98 MHz 10% Pilot (L + R) (L—R) (L Only)		R313	Adjust For Separation. Maximum Left Output.
50			Right Tape Output.			—	Check For Separation. Minimum Right Output.
NOTE: Do Not Readjust Control R303 After Step 48.							

CERAMIC FILTERS		
COLOR CODE	NOMINAL CENTER FREQUENCY	FREQUENCY RANGE
Black	10.64 MHz	10.61 to 10.67 MHz
Blue	10.67 MHz	10.64 to 10.70 MHz
Red	10.70 MHz	10.67 to 10.73 MHz
Orange	10.73 MHz	10.70 to 10.76 MHz
White	10.76 MHz	10.73 to 10.79 MHz

RF, IF AND MPX ALIGNMENT PROCEDURE FOR MODEL MC7051

STEP	CONNECT GENERATOR TO	DUMMY ANTENNA	CONNECT VTVM/ SCOPE TO	INPUT SIGNAL FREQ.	SET DIAL TO	ADJUST	PURPOSE	
VOLTAGE REGULATOR ADJUSTMENT CAUTION: Regulator Must Be Adjusted For Correct B+ Voltage.								
1	—	—	VTVM Pin 505	—	—	R509	Adjust For +33V.	
AUDIO OUTPUT IDLE CURRENT ADJUSTMENT CAUTION: Output Stages Must Be Adjusted For Proper Idle Current Under No Signal Conditions Before Performing Other Adjustments Or Alignment.								
2	—	—	VTVM Across R1418	No Signal Input	—	R1409	Adjust Controls for 8 mV Across Corresponding Resistors. This Would Equal Approximately 16 mA.	
3			Across R1468			R1459		
AM ALIGNMENT — PREFERRED METHOD — WITH AM SWEEP GENERATOR NOTE: For AM IF Alignment Use AM Sweep Signal Generator Of 10 KHz Deviation, 60 Hz Modulation For Full Bandpass Display. Bandswitch In AM. Also Connect Modulation Frequency To Scope Horizontal. (If AM Sweep Not Available, See Steps 17 Through 31.)								
4	Short C1J (AM Gang Antenna Section) To Chassis Ground.							
5	Test Point "K" AM IF Input	Generator Output Probe "A"	Scope Detector Output Across R110	± 455 KHz	Gang Closed	—	Adjust Generator To Center Frequency Of Ceramic Filter.	
6				Tune Generator To Center Total Bandpass Waveform. Do Not Change Generator Frequency For Remainder Of AM IF Alignment.				
7				Center Freq. Of Ceramic Filter In T102	Gang Closed	L103, L104 (T102)	Adjust For Maximum Gain And Symmetry.	
8				T101				Adjust For Maximum.
9	Remove Short Between C1J And Chassis Ground.							
10	One Turn Loosely Coupled To AM Wavemagnet Antenna	None	Scope Detector Output Across R110	1400KHz	1400KHz	C1K	Set Oscillator To Dial Scale.	
11				600KHz	600KHz	L102		
12				Repeat Steps 10 & 11 For Minimum Change.				
13				1400KHz	1400KHz	C1J	Align Antenna Stage.	
14				600KHz	600KHz	L101 If Necessary		
15				Repeat Steps 13 & 14 For Minimum Change.				
16				1000 KHz	1000 KHz	R106	Adjust For A Reading Of 4 To 5 On Meter M102 With Input Of 74dBV(5mV).	
AM ALIGNMENT — ALTERNATE METHOD — IF AM SWEEP GENERATOR IS NOT AVAILABLE NOTE: For AM IF Alignment Use A Signal With 400 Hertz Modulation. Bandswitch In AM.								
17	Short C1J (AM Gang Antenna Section) To Chassis Ground.							
18	Test Point "K" AM IF Input	Generator Output Probe "A"	VTVM Detector Output Across R110	± 455 KHz	Gang Closed	—	Adjust For Maximum.	
19				Rock Generator While Adjusting L103 (T102 Primary) For Maximum.				
20				Rock Generator While Adjusting L104 (T102 Secondary) For Maximum.				
21				Repeat Steps 19 & 20 For Minimum Change.				
22				Equal Output Should Be Found If Generator Is Detuned Equal Frequency Each Side Maximum.				
23				Center Freq. Of Ceramic Filter In T102	Gang Closed	T101		
24	Remove Short Between C1J And Chassis Ground.							
25	One Turn Loosely Coupled To AM Wavemagnet Antenna	None	VTVM Detector Output Across R110	1400 KHz	1400 KHz	C1K	Set Oscillator To Dial Scale.	
26				600 KHz	600 KHz	L102		
27				Repeat Steps 26 & 27 For Minimum Change.				
28				1400 KHz	1400 KHz	C1J	Align Antenna Stage.	
29				600 KHz	600 KHz	L101 If Necessary		
30				Repeat Steps 29 & 30 For Minimum Change.				
31	1000 KHz	1000 KHz	R106	Adjust For A Reading Of 4 To 5 On Meter M102 With Input Of 74dBV(5mV).				

RF, IF AND MPX ALIGNMENT PROCEDURE FOR MODEL MC7051 – Cont'd.

STEP	CONNECT GENERATOR TO	DUMMY ANTENNA	CONNECT VTVM/ SCOPE TO	INPUT SIGNAL FREQ.	SET DIAL TO	ADJUST	PURPOSE
FM ALIGNMENT Note: For FM IF Alignment Use A Signal Of 250 KHz Deviation, 50 Hertz Modulation For Full Bandpass Display. Bandswitch In FM. Preset R208, R211 And R303 To Mid Rotation Before Connecting Generator. Connect Generator Cable Ground To Gang Frame.							
32	Shunt C1B To Ground With A .001 MF Capacitor.						
33	Test Point "D" FM IF Input At High Side Of C1F	Generator Output Probe "A"	Scope	10.7 MHz	Gang Closed	—	Align I.F. Transformer For Maximum Output And Symmetry As Indicated In Scope Pattern "A".
34			Detector Probe "C"	Tune Generator To Center Total Bandpass Waveform. Do Not Change Generator Frequency For Remainder Of FM IF Alignment.			
35			Test Point At IC201 Pin 1.	Center Freq. Of Ceramic Filters Y201, Y202, Y203	Gang Closed	T1	
36	Test Point "A" FM Antenna Post (Disconnect Antenna)	300 Ohm	Scope Test Point "H"	98 MHz	98 MHz	R216	Adjust For No Sound Output When Input Is Below 1.7μV With Mute Switch ON.
37						R215	Adjust For A Reading Of 4 To 5 One Meter M102 With Input Of 60dBV (1mV).
NOTE: For FM Detector Alignment Use A Signal Of 75 KHz Deviation, 1 KHz Modulation. Also Connect Generator Modulation Frequency To Scope Horizontal. Adjust Generator IF Frequency To Center Total Bandpass Waveform. Do Not Change Generator IF Frequency For Remainder Of IF Alignment. (If Your Generator Does Not Provide Output For Audio Modulation Frequency Use Horizontal Output From Generator, Or Scope Horizontal Sweep, And Follow Step 38C). Minimum Distortion Can Only Be Achieved By Use Of Step 38A Below.							
38	Test Point "D" FM IF Input At High Side Of C1F	Generator Output Probe "A"	A. Distortion Analyzer (Thru A 100 Usec De-emphasis Network) Probe "B" And Scope. B. Scope C. Scope	Center Frequency Of Ceramic Filters Y201, Y202, Y203.	Gang Closed	L204, L205 (T201)	A. Preferred Method: Distortion Analyzer At Test Point "H" Should Read Minimum Distortion. B. Alternate Method: Adjust For Linear Scope Trace-No Curve At Ends Of Trace. Disregard Meter Reading. C. Alternate Method: Adjust For Maximum Length And Symmetry, Similar To Scope Pattern "A".
39			Test Point "H"			L205	Adjust For Center Reading On Tuning Meter M101.
40	Test Point "A" FM Antenna Post (Disconnect Antenna)	300 Ohm		106 MHz	106 MHz	C1H	Set Oscillator To Dial Scale.
41				90 MHz	90 MHz	L7	
42				Repeat Steps 40 & 41 For Minimum Change.			Align FM Detector Stage For Maximum.
43				106 MHz	106 MHz	C1D, C1F	
44				90 MHz	90 MHz	L3, L4	Align FM Antenna Stage For Maximum.
45				106 MHz	106 MHz	C1B	
46				90 MHz	90 MHz	L2 If Necessary	
47				Repeat Steps 43 Thru 46 For Minimum Change.			
48	Audio Osc.	—	Test Point "F"	200 KHz	—	T301	Align For Minimum.
49	Test Point "H"					T302	
NOTE: Apply Sufficient Signal Level — Approx. 100 Microvolts — To Obtain Full Limiting At Point Near 98 Mhz.							
50	—	—	Frequency Counter And/ Or Scope Test Point "M"	Unmodulated RF Carrier		R308	A. Frequency Counter Should Read 19 KHz, ± 100 Hz. B. Alternate Method: Connect Test Point "M" Signal To Scope Vertical And An Accurate 19 KHz Signal To Scope Horizontal Input. Adjust For One Square Synchronized Waveform.
51			Scope And/Or AC VTVM Left Tape Output	98 MHz 10% Pilot (L+R) (L-R) (L Only)		R318	Adjust For Separation. Maximum Left Output.
52			Right Tape Output.			—	Check For Separation. Minimum Right Output.
NOTE: Do Not Readjust Control R308 After Step 50.							

CERAMIC FILTERS		
COLOR CODE	NOMINAL CENTER FREQUENCY	FREQUENCY RANGE
Black	10.64 MHz	10.61 to 10.67 MHz
Blue	10.67 MHz	10.64 to 10.70 MHz
Red	10.70 MHz	10.67 to 10.73 MHz
Orange	10.73 MHz	10.70 to 10.76 MHz
White	10.76 MHz	10.73 to 10.79 MHz

DISASSEMBLY PROCEDURES



FIGURE 1 – MODEL MC7041 – FRONT VIEW

MODELS MC7031 AND MC7041

CHASSIS ACCESS

Access to most areas of the chassis can be achieved by removal of the cabinet top and the bottom cover (See Figures 1 and 2). Numbers in parenthesis () correspond to the numbers shown on exploded views and other illustrations.

CABINET TOP REMOVAL

1. Remove two screws (83 on MC7031 and 82 on MC7041) and their cup washers (58) located on each side of the cabinet (1).
2. Lift cabinet (1) upward from chassis.

CHASSIS BOTTOM COVER REMOVAL

1. Remove nine screws (82 on MC7031 and 81 on MC7041) from bottom cover (2).

NOTE: It is not necessary to remove the four screws (81 on MC7031 and 80 on MC7041) holding the four feet (59 on MC7031 and 87 on MC7041).

2. When removing bottom cover (2) note that the front edge of bottom cover must be inserted under lip of front frame when it is reinstalled.

FRONT PANEL (ESCUTCHEON REMOVAL)

Certain components along the front edge of the chassis can be reached only after the front panel (3) has been removed:

1. Loosen the allen screw (recessed in tuning knob assembly) holding tuning knob assembly (6) to tuning shaft (18 on MC7031 and 20 on MC7041).
2. Remove tuning knob assembly from shaft.
3. Remove remaining knobs by pulling outward.
4. Remove five screws from the front panel (3).
 - a. Three screws (74 on MC7031 and 77 on MC7041) are located on the bottom.
 - b. Two screws (72 on MC7031 and 86 on MC7041) are located on the top.
5. Remove front panel (3) by pulling outwards.

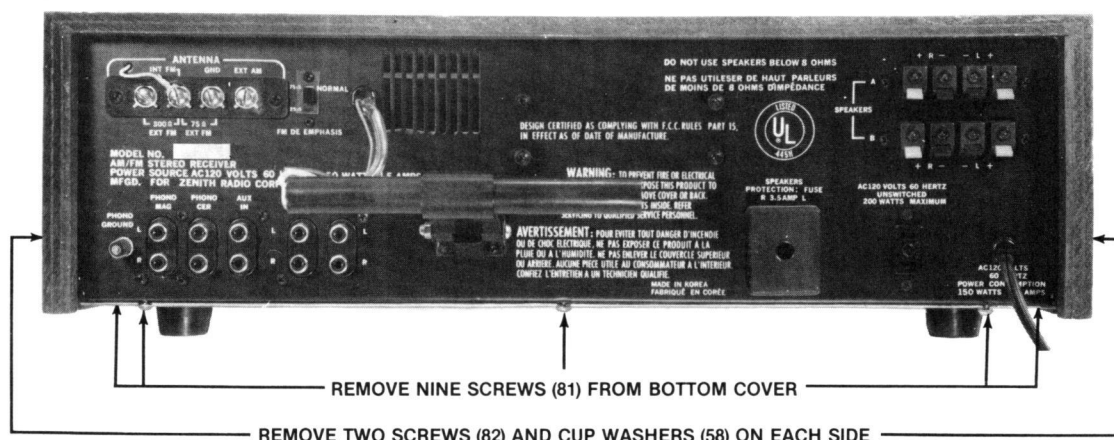


FIGURE 2 – MODEL MC7041 – BACK VIEW

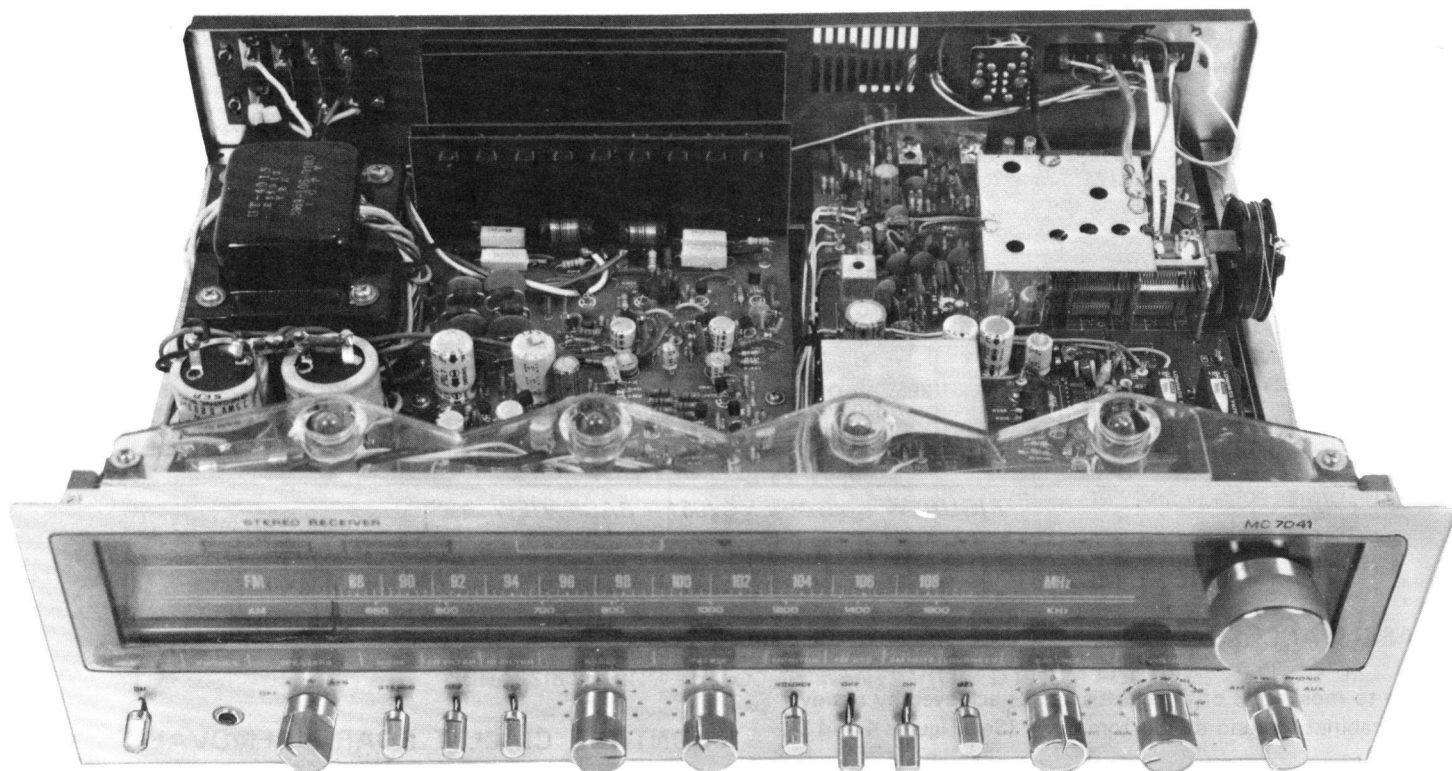


FIGURE 3 – MODEL MC7041 – CHASSIS VIEW

DIAL LIGHT REPLACEMENT

Four wedge base type lamps (DS501 through DS504) are used in these models. They may be replaced in the following manner.

1. Remove cabinet top (1) as explained above.
2. Lamps are mounted in grommets (60 on MC7031 and 21 on MC7041).
3. Remove grommet and lamp.
4. Lamp is soldered to leads within grommet.
5. Carefully pull lamp out of grommet.
6. Unsolder lamp leads and remove lamp.
7. Solder new lamp to leads.
8. Press lamp into grommet, being certain that it is fully seated.
9. Press grommet firmly into light reflector (23 on MC7031 and 22 on MC7041), using a twisting motion until it is secure.
10. Be certain that leads are dressed away from the dial cord.

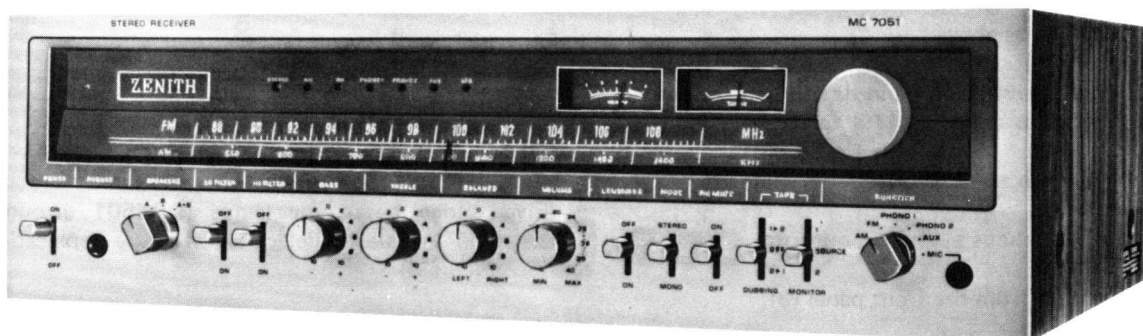


FIGURE 4 – MODEL MC7051 – FRONT VIEW

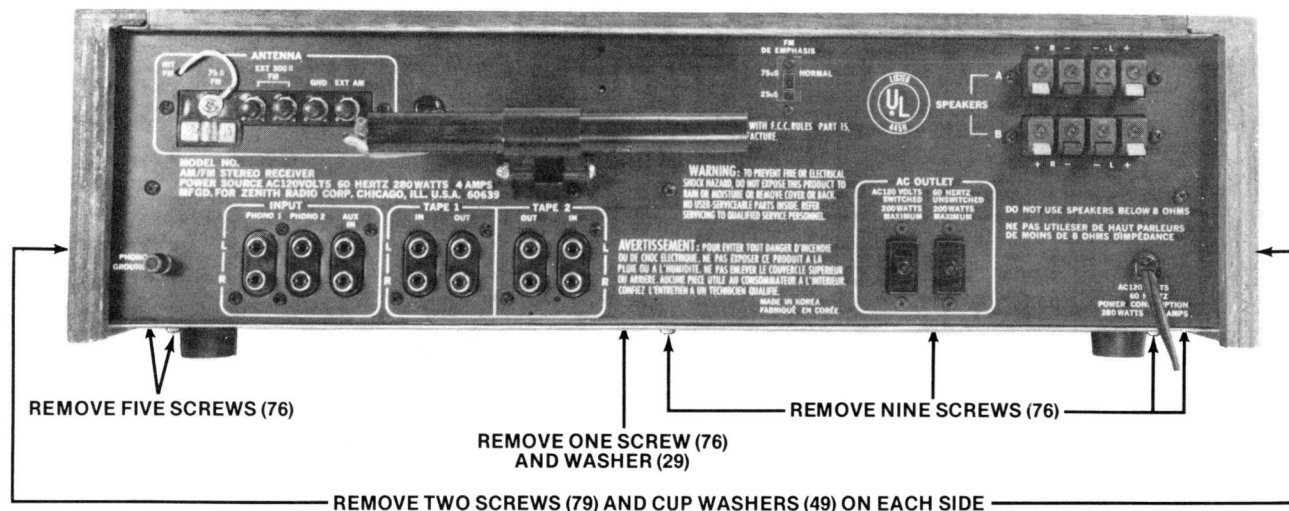


FIGURE 5 – MODEL MC7051 – BACK VIEW

MODEL MC7051

CHASSIS ACCESS

Access to most areas of the chassis can be achieved by removal of the cabinet top and the bottom cover (See Figures 4 and 5).

CABINET TOP REMOVAL

1. Remove two screws (79) and their cup washers (49) located on each side of the cabinet (1).
2. Lift cabinet (1) upward from chassis.

CHASSIS BOTTOM COVER REMOVAL

1. Remove fourteen screws (76) from bottom cover (2).
2. Remove one screw (76) and metal washer (29) located near center of bottom cover (1).

NOTE: It is not necessary to remove the four screws (77) holding the four feet (48).

FRONT PANEL (ESCUTCHEON) REMOVAL

Certain components along the front edge of the chassis can be reached only after the front panel (3) has been removed:

1. Remove cabinet (1) as above.
2. Loosen the allen screw (recessed in tuning knob assembly) holding tuning knob assembly (15) to tuning shaft (24).
3. Remove tuning knob assembly (15) from shaft (24).
4. Remove remaining knobs by pulling outward.
5. Remove five screws from the front panel (3).
 - a. Three screws (82) are located on the bottom.
 - b. Two screws (74) are located on the top.

6. Remove front panel (3) by pulling outwards.

CONTROL CIRCUIT BOARD REMOVAL

Most customer operating controls are mounted on one circuit board assembly (98) located directly behind the front panel (3). Proceed as follows:

1. Remove the cabinet top (1), bottom cover (2) and front panel (3) as explained above.
2. Remove masking strips (27, 28) from the eight toggle type control levers.
3. Release interconnecting wires and cables from three wire retaining clips (40, 41) on top of chassis and from one clip (34) on bottom of chassis (adjacent to circuit board).
4. Remove four screws from front chassis frame (5).
5. Slide control chassis assembly to rear and downward until it clears front chassis frame (5).
6. Reinstall control chassis assembly, reversing the above procedure.

NOTE: When reinstalling the control chassis assembly, slide the end nearest the tuning control inward first.

DIAL LIGHT REPLACEMENT

Five wedge base type lamps (DSX501 through DSX505) are used in this model. They may be replaced as follows: (See Figure 6):

1. Remove cabinet top (1) as explained above.
2. Twist lamp socket (101) counterclockwise and remove lamp socket (101) with lamp.

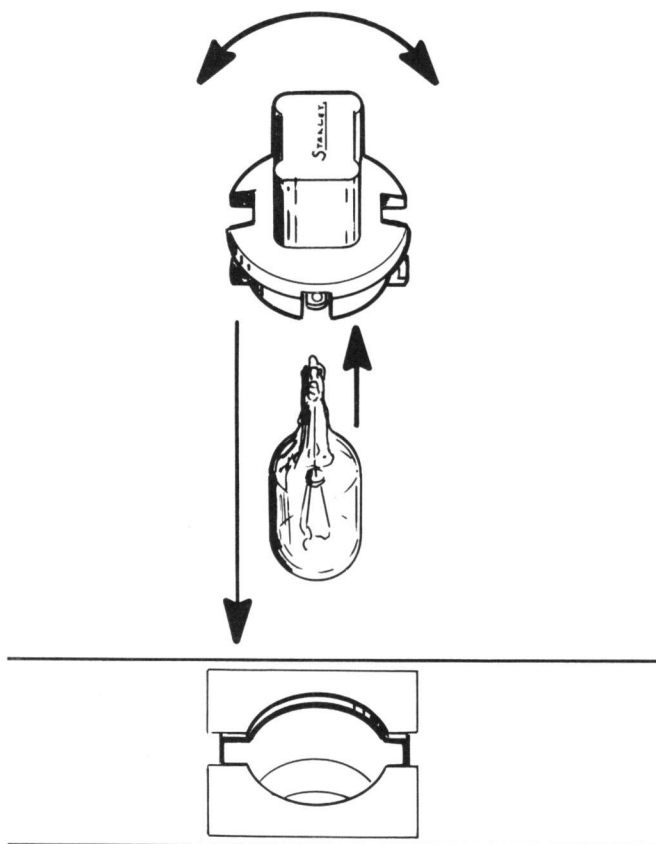


FIGURE 6 – MODEL MC7051 –
DIAL LIGHT REPLACEMENT

3. Pull lamp straight out of socket.

NOTE: These lamps snap into clip type contacts in the lamp socket.

4. Install new lamp in socket by aligning lamp contacts with clip contacts in lamp socket (101) and pressing lamp fully into clip contacts.
5. Reinsert lamp socket (101) into lamp circuit board (97) and rotate lamp socket (101) clockwise to secure.

NOTE: Do not use excessive pressure when inserting and rotating the lamp sockets.

OUTPUT TRANSISTOR REPLACEMENT ACCESS

Replacement of output transistors can be made easier by removing the output amplifier circuit board (95) and heat sink (10) as follows (See Figure 7):

1. Remove three screws (82) in mounting bracket (46) and another three screws (82) in bracket (47).
2. Remove one screw (88) mounting output amplifier circuit board (95).
3. Raise assembly and tilt forward to provide the desired access.
4. Replace transistors in the normal manner.

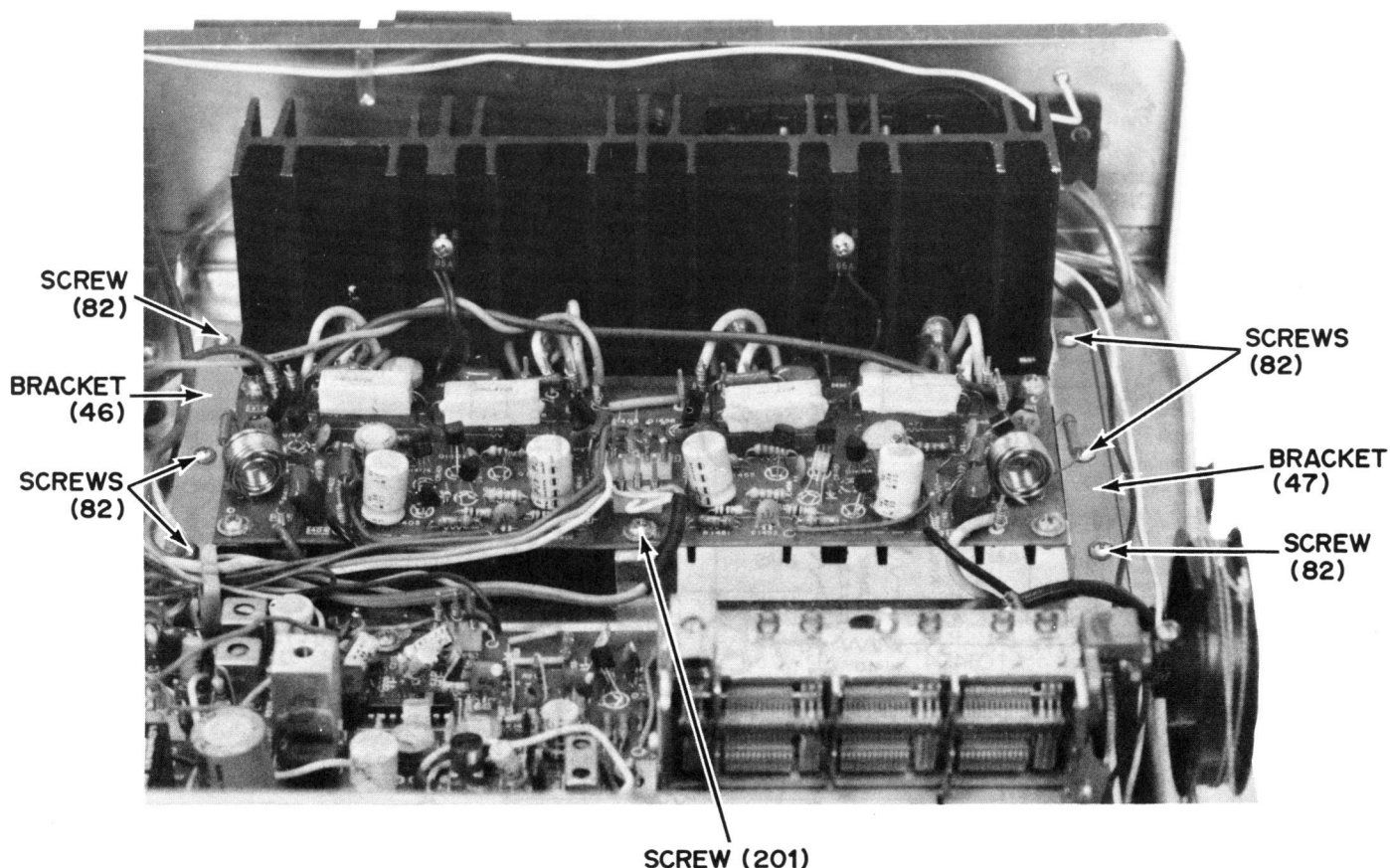


FIGURE 7 – MODEL MC7051 – POWER OUTPUT AMPLIFIER

THEORY AND APPLICATION

MODELS MC7031, MC7041, AND MC7051

Basic circuitry for these models has been covered in Service Manual HF-38 (Part No. 923-943), however there are certain points which are also being included, or expanded in this manual.

MODEL MC7051

FM RF

(See Figure 8)

A dual gate FET is used for FM RF, while two conventional NPN transistors are used for FM Oscillator and FM Mixer. Oscillator injection is accomplished by coupling from the tap on Oscillator Coil L7 to the base of FM Mixer Q2. FM signal is coupled from FM RF Q1 to FM Mixer Q2 via the inductive coupling between the RF Coil L3 and Mixer Coil L4. Looking at the chassis, the FM tuner assembly is enclosed within a metal shield. Through an opening in the top of the shield, one can see L3 and L4. These coils are inductively coupled via the approximate 1/2" spacing between them.

OUTPUT STAGES

(See Figure 9)

Each output channel of this model contains four transistors (Q1401, Q1402, Q1403 and Q1404) in a differential amplifier circuit, two predriver transistors (Q1405 and Q1407), one bias transistor (Q1406), two driver transistors (Q1408 and Q1409) and two output transistors (Q1410 and Q1411). Driver transistors Q1408 and Q1409 operate in push-pull and drive Output transistors Q1410 and Q1411 respectively. L1401 is

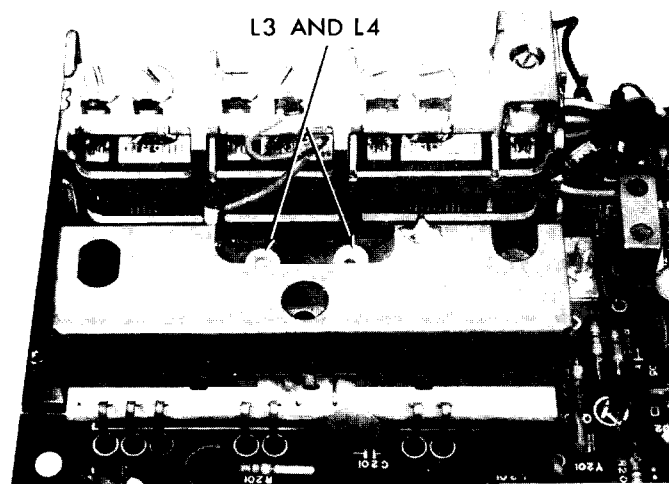


FIGURE 8 – MODEL MC7051 – FM TUNER

incorporated to compensate for capacitive loads at the output terminals. R1409 provides for idle current adjustment.

AUTOMATIC SPEAKER PROTECTION CIRCUIT (See Figures 9, 10 and 11)

Special circuitry is incorporated in this model to provide automatic speaker protection in the event of either excessive voltage, excessive current or low impedance. In the event that a higher than normal voltage appears at the output (after L1401), it will appear across R747. If the voltage is in the

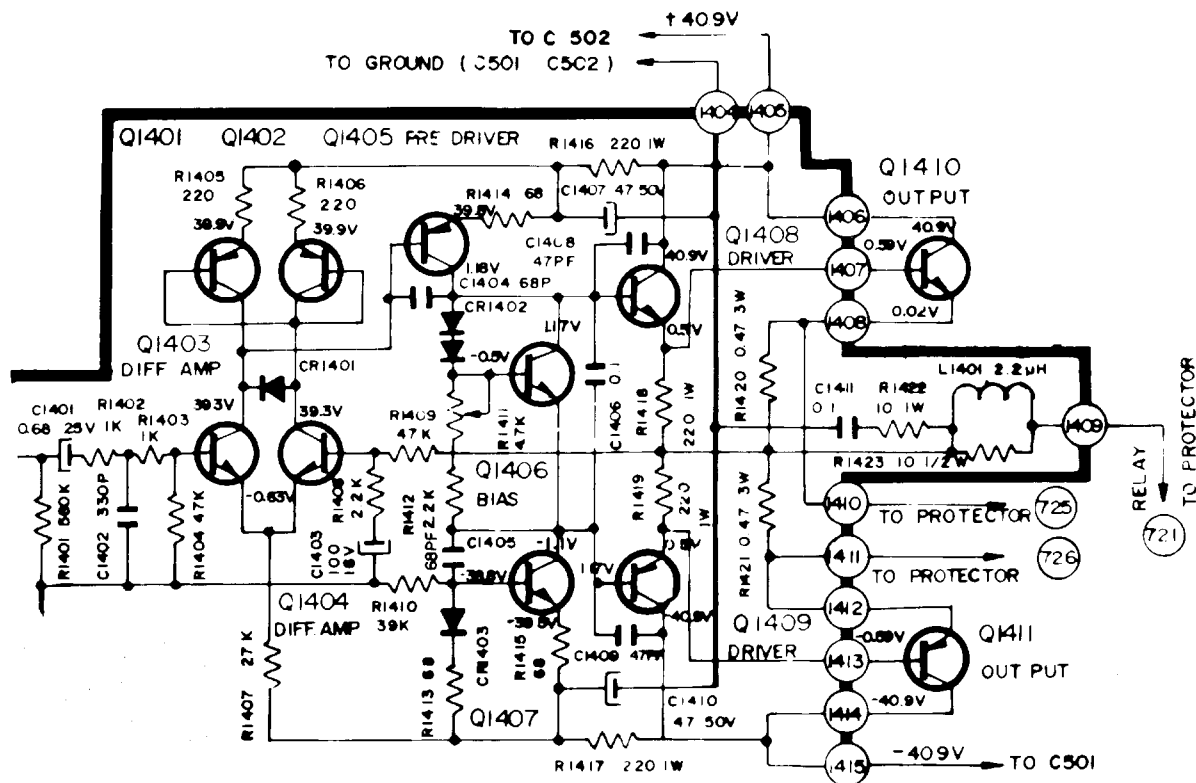


FIGURE 9 – MODEL MC7051 – OUTPUT STAGE SCHEMATIC

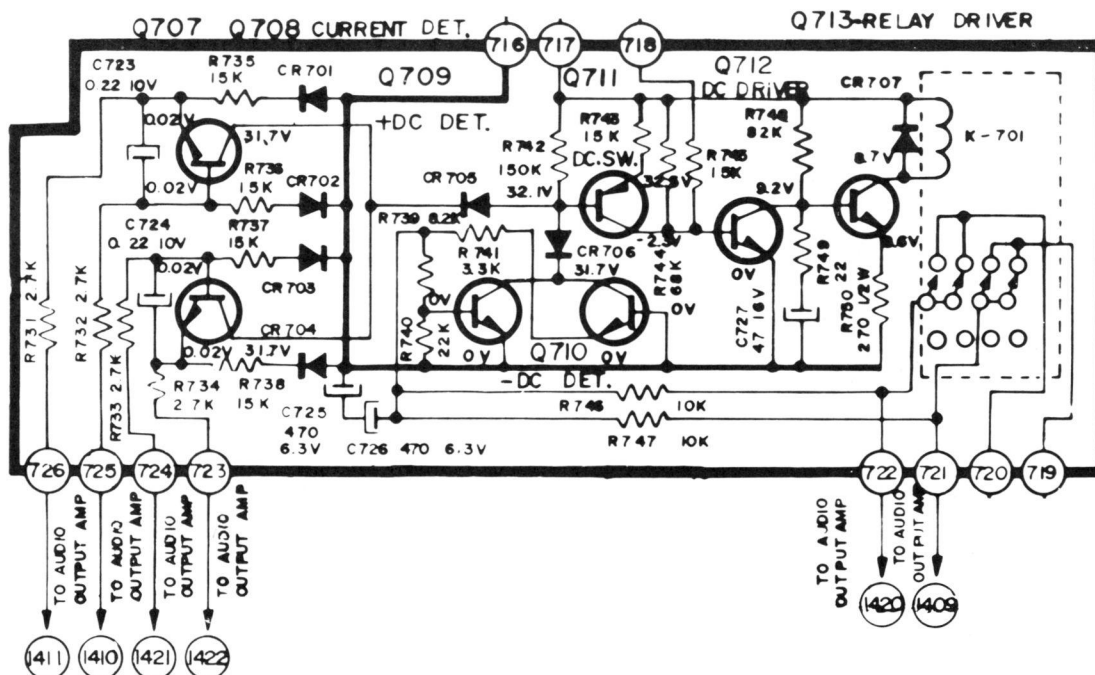


FIGURE 10 – MODEL MC7051 – OUTPUT STAGE IC BLOCK DIAGRAM

positive direction Q709 will conduct, turning on Q711 and Q712. This in turn switches Q713 off, deactivating relay K701. When the closed contacts on relay K701 are switched open, the circuit to the speaker connectors is opened. When

the over-voltage is in the negative direction Q710 will turn on, and in turn, Q711 and Q712 will switch on. This will also deactivate Q713 and relay K701, thereby protecting the speakers.

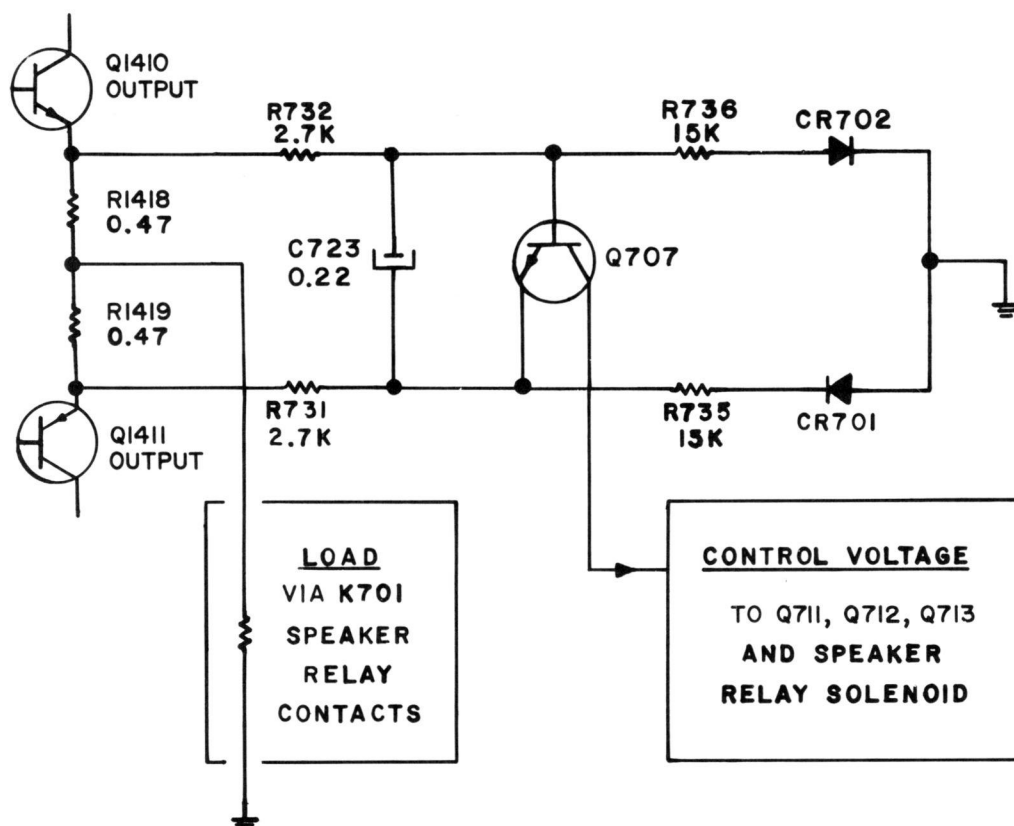


FIGURE 11 – MODEL MC7051 – AUTOMATIC SPEAKER PROTECTION CIRCUIT



FIGURE 12 – MODEL MC7051 – SPEAKER CONNECTIONS

Current overload protection occurs when excess current is sensed through R1418 and R1419. These currents will flow via R731 and R732. Small overloads will develop a voltage between base and emitter of Q707, causing Q707 to conduct, CR705 will be biased on, applying bias to Q711. Q711 will turn Q712 on and Q713 off, deactivating K701. When higher overload currents exist, they will cause a larger voltage across Q707's base emitter junction. This will cause diodes CR701 and CR702 to turn on, providing protection for Q707.

An added circuit function is the protection of output circuitry used in these models if the external load impedance is below the design limit. A low load impedance could exist if:

1. Wrong impedance speakers were connected. **CAUTION** – One four ohm and one eight ohm speaker would result in an effective load impedance that is below the design limit.

2. Shorted voice coil winding, or other circuit defect.

One eight ohm speaker connected to each "A" and "B" speaker output results in the minimum recommended load impedance.

As long as the effective load impedance is greater than approximately three ohms, the resistance ratio of R735/R731 will closely match the ratio of R1419/Load. The same would also be true of ratios R736/R732 and R1418/Load. Under this condition, voltages from outputs will not overcome the opposing voltages developed by diodes CR701 and CR702. This maintains transistor Q707 at "cut-off".

If the load impedance drops below approximately three ohms, the ratios change, causing the emitter voltage of Q707 to go negative and the base voltage to go positive. This will forward bias Q707, turning it "on". When Q707 conducts, it will activate the remainder of the circuitry, causing speaker relay K701 to open, disconnecting the low impedance load, thereby protecting the receiver's output circuitry.

SPEAKER CONNECTORS

Models in this manual are provided with push type wire connectors of the type illustrated in Figure 12. The eight individual connectors are wired internally to provide two pairs of connectors for the right channel and two pairs for the left channel. Corresponding left and right channel pairs are selected by a front panel speaker selector switching system. One connector in each pair is marked in red, while the other is black. The red connector is the "hot" lead for the pair. Speaker cable normally has one of the two conductors marked with a color stripe or has a rib molded as part of the insulation.

This marked lead is the positive lead and should be connected to the red connector, while the unmarked conductor goes to the black connector of a pair. To make connections to either of these terminals, depress the moving part of the connector, insert bared end of lead into hole in proper connector (note marking on leads), then release pressure on connector. Repeat same procedure for other lead.

NOTES

AUDIO MODEL MC7031W

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
CABINET COMPONENTS					
C517	822-02632	6800 μ F 35V ELECTROLYTIC	0046	812-01209	AM ANTENNA HOLDER BRACKET
C518	822-02632	6800 μ F 35V ELECTROLYTIC	0047	817-00311	DE-EMPHASIS SWITCH BRKT CLAMP
C911	822-02698	39pF \pm 5% 50V CERAMIC CAP	0048	883-01036	ANTENNA TERMINAL STRIP
C912	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP	0049	844-00223	JACK CLUSTER (PHONO CER. L R, AUX IN L R & TAPE IN L R, TAPE OUT L R 2 REQ.)
C961	822-02698	39pF \pm 5% 50V CERAMIC CAP	0050	844-00221	JACK CLUSTER (PHONO MAG L R)
DS501	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0051	886-00329	CHASSIS GROUND LUG
DS502	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0052	926-00392	TUNING CAPACITOR SHIELD
DS503	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0053	926-00356	TUNING CAPACITOR SHIELD
DS504	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0054	926-00385	TUNING ASSEMBLY SHIELD
F1401	936-00065	3 AMP R. CHAN. SPKR PRTECT'N FUSE	0055	880-01287	DIAL CORD TENSION SPRING
F1451	936-00065	3 AMP L. CHAN. SPKR PRTECT'N FUSE	0056	861-00481	TUNING CAPACITOR PULLEY
F501	936-00071	0.5 AMP SLO-BLO PIGTAIL FUSE	0057	874-00053	VENTILATION SCREEN
F502	936-00068	2 AMP PIGTAIL FUSE	0058	893-01182	CABINET RETAINING WASHER (4 REQ.)
F503	936-00080	5 AMP PIGTAIL FUSE	0059	966-00109	CABINET FOOT(4 REQ.)
F504	936-00080	5 AMP PIGTAIL FUSE	0060	841-00234	DIAL LAMP HOLDER(4 REQ.)
J001	844-00224	HEADPHONE JACK	0061	912-02188	3MM SCREW (RETAINS REF. NO. 46, 812-1209, AM ANTENNA BRACKET)
L111	820-01147	AM ANTENNA COIL	0062	854-00319	3MM NUT (USED ON REF. NO. 61, 912-2188)
M101	922-00067	FM TUNING METER	0063	897-00306	TOOTHED LOCKWASHER(PART OF REF. NO. 64,886-337, GROUND STUD)
M102	922-00062	AM SIGNAL METER	0064	886-00337	MAGNETIC PHONO GROUND STUD
P501	811-00218	AC LINE CORD	0065	854-00345	6.35MM NUT(RETAINS REF. NO.64, 886-337,STUD.& REF.NO.66,893-1093)
Q503	921-01167	PHONO EQUALIZER VOLTAGE REGULATOR TRANSISTOR NPN	0066	893-01093	8MM TOOTHED LOCKWASHER(RETAINS REF. NO. 64,886-337, STUD)
Q504	921-01062	PHONO EQUALIZER VOLTAGE REGULATOR TRANSISTOR NPN	0067	912-02149	3X6MM ROUND HEAD SCREW (20 REQ.)
R1428	863-02692	330 Ω \pm 10% 1W METAL FILM RES	0068	912-02150	3X8MM ROUND HEAD SCREW(2 MT. REF. NO. 23,998-54, REFLECTOR)
R1478	863-02692	330 Ω \pm 10% 1W METAL FILM RES	0069	912-02151	3X10MM ROUND HEAD SCREW(4 REQ.)
R508	863-02470	1800 Ω \pm 5% 1/4W CARBON FILM RES	0070	912-02154	3X15MM RND HEAD SCREW (4 USED, 2 EA. REF. NO. 32, 926-391, HEAT SINK, & Ref No 33, 926-354, HT SINK)
R512	863-02458	2.2M Ω \pm 5% 1/2W LINE ISOLATION RES	0071	912-02208	3X10MM SCREW(18 REQ.)
R913	863-02496	3.3M Ω \pm 5% 1/4W CARBON FILM RES	0072	912-02191	3X8MM SCREW(2 REQ.)
R914	863-02721	1.2M Ω \pm 5% 1/4W CARBON FILM RES	0073	912-02159	3X8MM SCREW(4 RETAIN REF. NO. 97 844-226, JACK CLUSTER)
R963	863-02496	3.3M Ω \pm 5% 1/4W CARBON FILM RES	0074	912-02181	3X6MM SCREW (31 REQ.)
R964	863-02721	1.2M Ω \pm 5% 1/4W CARBON FILM RES	0075	912-02241	3X12MM SCREW(12 REQ.)
S001	885-00627	ROTARY FUNCTION SWITCH (AM, FM, PHONO, AUX PART OF REF.NO.92 804724 SWITCH & PCB)	0076	912-02203	3X8MM SCREW (12 REQ.)
S009	885-00615	ROTARY SPEAKER SELECT SWITCH	0077	912-02379	3X6MM SCREW(2 RETAIN REF. NO. 99, 878-115, AC SOCKET)
S501	885-00577	AC POWER LEVER SWITCH	0078	912-02192	2.6X10MM SCREW(2 USED)
T501	895-01099	POWER TRANSFORMER	0079	912-02185	2.6X4MM SCREW(MTS. REF. NO. 47, 817-311, DE EMPHASIS SW. CLAMP)
0001	814-01022	WOOD CABINET	0080	912-02190	SPECIAL SCREW(RETAINS REF. NO. 50 844-222, JACK CLUSTER)
0002	804-00605	CHASSIS BOTTOM	0081	912-02373	4X8MM SCREW(4 RETAIN REF. NO. 59 966-109, CABINET FOOT)
0003	857-01710	FRONT PANEL	0082	912-02381	4X8MM SCREW(4 REQ.)
0004	804-00704	BACK PANEL	0083	912-02375	4X12MM SCREW
0005	804-00603	CHASSIS FRONT	0084	893-01183	5.9MM SPLIT LOCKWASHER(4 REQ.)
0006	846-01044	TUNING KNOB	0085	893-01153	7MM WASHER(4 REQ.)
0007	846-01094	FUNCTION SWITCH KNOB (AM, FM PHONO & AUX)	0086	854-00348	3MM HEX NUT(8 REQ.)
0008	846-01097	TONE CONTROL KNOB (2 REQ.)	0087	854-00346	2.6MM HEX NUT(2 REQ.)
0009	846-01065	POWER SWITCH KNOB	0088	861-00447	12X2.4MM PULLEY(2 REQ.)
0010	894-00313	PUSH SWITCH INSULATING BUSHING (1 USED ON EA Ref No 11 846-1064 KNOB)	0089	861-00423	16MM PULLEY(2 REQ.)
0011	846-01064	PUSH KNOB (MODE MONO STEREO, LO FILTER ON OFF, HI FILTER ON OFF, MONITOR TAPE SOURCE, FM AFC ON OFF, FM MUTE ON OFF, LOUDNESS ON OFF 7 REQ.)	0090	825-00064	PULLEY RETAINING PIN(4 REQ.)
0012	843-00269	PUSH KNOB GUIDE (1 USED ON EACH REF. ON. 11 846-1064 KNOB 7 REQ.)	0096	804-00725	DE-EMPHASIS PCB ASSEM (PCB SWITCH & CAPACITORS)
0013	992-00213	DIAL LENS	0097	844-00226	SPEAKER QUICK CONNECTORS (A L & R - B L & R 2 REQ.)
0014	824-00549	TUNING SHAFT COVER	0098	885-00578	DE-EMPHASIS SLIDE SWITCH (PART OF REF. NO. 96 804-725 PCB ASSEMBLY)
0015	826-00207	TUNING DIAL SCALE	0099	878-00115	A.C. SOCKET
0016	812-01211	DIAL SCALE RIGHT MTG BRACKET	0101	857-01681	ZENITH NAME PLATE
0017	812-01210	DIAL SCALE LEFT MTG BRACKET	TUNER PRINTED CIRCUIT BOARD COMPONENTS		
0018	876-00565	TUNING SHAFT	CR001	903-00345	FM AFC DIODE
0019	883-01052	TUNING METER RETAINING STRIP	CR101	903-00418	AM IF DIODE
0020	812-01212	TUNING METER MTG BRACKET	CR102	903-00418	AM 1ST DETECTOR DIODE
0021	812-01213	L E D LAMP MTG BRACKET	CR103	903-00418	AM 2ND DETECTOR DIODE
0022	812-01310	BRACKET MTS. REF. NO. 91 804-729 L E D PRINTED CIRCUIT BOARD	CR104	903-00384	AM AGC DIODE
0023	998-00054	DIAL LAMP REFLECTOR	CR105	903-00384	AM OVERLOAD DIODE
0024	883-01042	LEVER SWITCH MASKING STRIP	CR201	903-00419	FM OVERLOAD DIODE
0025	812-01311	POWER SWITCH JTG BRACKET	CR202	903-00419	FM AGC DIODE
0026	812-01340	HEADPHONE JACK MTG BRACKET	CR203	903-00419	FM TUNING METER DIODE
0027	859-00306	DIAL POINTER	CR301	903-00418	FM MULTIPLEX SWITCHING DIODE
0028	859-00307	DIAL POINTER GUIDE	C001	822-02852	VARIABLE TUNING CAPACITOR
0029	812-01216	TONE CONTROL MTG BRACKET	C002	822-02930	15pF \pm 5% 50V CERAMIC CAP
0030	833-00215	CHASSIS MTG FRAME (2 REQ.)	C003	822-02570	100pF \pm 5% 50V CERAMIC CAP
0031	833-00214	FRAME (MTS. POWER AMPLIFIER P C B)	C004	822-02931	0.01 μ F +100-0% 50V CERAMIC CAP
0032	926-00391	POWER AMPLIFIER HEAT SINK	C005	822-02931	0.01 μ F +100-0% 50V CERAMIC CAP
0033	926-00354	POWER AMPLIFIER HEAT SINK	C006	822-02379	4700pF \pm 20% 50V CERAMIC CAP
0034	894-00314	POWER TRANSISTOR INSULATING BUSHING(4 REQ.)	C007	822-02368	10pF \pm 0.5pF 50V CERAMIC CAP
0035	812-01207	POWER TRANSFORMER MTG BRACKET	C008	822-02930	15pF \pm 5% 50V CERAMIC CAP
0036	812-01208	FILTER CAP. MTG BRACKET (2 REQ.)	C009	822-02408	220 μ F 16V ELECTROLYTIC
0037	883-01022	5 LUG TERMINAL STRIP(2 REQ.)	C010	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
0038	886-00335	2 LUG CONNECTOR (FOR REF. NO.C517 & C518 822-2632 ELECTROLYTIC)	C011	822-02367	7pF \pm 0.5pF 50V CERAMIC CAP
0039	880-01223	POWER TRANSISTOR CLIP SPRING	C012	822-02570	100pF \pm 5% 50V CERAMIC CAP
0040	811-00217	WIRE TIE STRAP (USED ON Ref No P501 811-218, AC CORD)	C013	822-02561	0.75pF \pm 0.25pF 50V GIMMICK CAP
0041	817-00307	STRAIN RELIEF CLAMP (RETAINS REF. NO. P501,811-218,AC CORD)	C014	822-02628	18pF \pm 5% 50V CERAMIC CAP
0042	824-00575	SPEAKER PROTECTION FUSE COVER	C015	822-02563	8pF \pm 0.5pF 50V CERAMIC CAP
0043	862-00005	SPEAKER PROTECTION FUSE HOLDER (MTS. REF. NO.F1401,F1451,936-65.)	C016	822-02379	4700pF \pm 20% 50V CERAMIC CAP
0044	841-00226	AM ANTENNA HOLDER			

AUDIO MODEL MC7031W (Cont')

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
C017	822-02379	4700pF ±20% 50V CERAMIC CAP	L003	820-01127	2.2μH CHOKE
C018	822-02370	33pF ±5% 50V CERAMIC CAP	L004	820-01146	FM OSCILLATOR COIL
C020	822-02931	0.01μF +100-0% 50V CERAMIC CAP	L203	820-01129	18UH CHOKE
C021	822-02497	0.022μF +80-20% 50V CERAMIC CAP	L204	820-01127	2.2UH CHOKE
C022	822-02379	4700pF ±20% 50V CERAMIC CAP	Q001	921-01108	FM RF AMPLIFIER TRANSISTOR FET
C101	822-02576	4700pF ±5% 50V MYLAR CAP	Q002	921-01059	FM MIXER TRANSISTOR NPN
C102	822-02367	7pF ±0.5pF 50V CERAMIC CAP	Q003	921-01059	FM OSCILLATOR TRANSISTOR NPN
C103	822-02586	330pF ±5% 50V POLYSTYRENE CAP	Q101	921-01081	AM RF AMPLIFIER-MIXER TRANS NPN
C104	822-02506	0.01μF ±5% 50V MYLAR CAP	Q102	921-01081	AM 1ST IF TRANSISTOR NPN
C105	822-02407	100μF 16V ELECTROLYTIC	Q103	921-01081	AM 2ND IF TRANSISTOR NPN
C106	822-02379	4700pF ±20% 50V CERAMIC CAP	Q201	921-01060	FM IF TRANSISTOR NPN
C107	822-02497	0.022μF +80-20% 50V CERAMIC CAP	Q301	921-01081	STEREO LAMP DRIV'R TRANSIST'R NPN
C108	822-02497	0.022μF +80-20% 50V CERAMIC CAP	Q302	921-01102	R.CHAN MULTIPLEX FILTER TRANS PNP
C109	822-02417	1μF 50V ELECTROLYTIC	Q352	921-01102	L. CHAN MULTIPLEX FILT'R TRANS PNP
C110	822-02580	0.047μF ±5% 50V MYLAR CAP	R001	863-02686	100KΩ ±5% 1/4W CARBON FILM RES
C111	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R002	863-02501	100Ω ±5% 1/4W CARBON FILM RES
C112	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R003	863-02686	100KΩ ±5% 1/4W CARBON FILM RES
C113	822-02580	0.047μF ±5% 50V MYLAR CAP	R004	863-02500	47Ω ±5% 1/4W CARBON FILM RES
C114	822-02366	3pF ±0.25pF 50V CERAMIC CAP	R005	863-02463	100Ω ±5% 1/4W CARBON FILM RES
C115	822-02500	0.001μF ±5% 50V MYLAR CAP	R006	863-02687	220KΩ ±5% 1/4W CARBON FILM RES
C116	822-02408	220μF 16V ELECTROLYTIC	R007	863-02498	3300Ω ±5% 1/4W CARBON FILM RES
C117	822-02506	0.01μF ±5% 50V MYLAR CAP	R008	863-02685	18KΩ ±5% 1/4W CARBON FILM RES
C118	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R009	863-02682	1KΩ ±5% 1/4W CARBON FILM RES
C119	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R010	863-02596	6800Ω ±5% 1/4W CARBON FILM RES
C120	822-02506	0.01μF ±5% 50V MYLAR CAP	R011	863-02684	12KΩ ±5% 1/4W CARBON FILM RES
C121	822-02936	0.1μF 50V MYLAR CAP	R012	863-02683	820Ω ±5% 1/4W CARBON FILM RES
C122	822-02585	3300pF ±5% 50V MYLAR CAP	R013	863-02681	22Ω ±5% 1/4W CARBON FILM RES
C123	822-02686	0.047μF +80-20% 50V CERAMIC CAP	R014	863-02501	100Ω ±5% 1/4W CARBON FILM RES
C124	822-02404	4.7μF 16V ELECTROLYTIC	R101	863-02463	100Ω ±5% 1/4W CARBON FILM RES
C125	822-02417	1μF 50V ELECTROLYTIC	R102	863-02489	120KΩ ±5% 1/4W CARBON FILM RES
C126	822-02368	10pF ±0.5pF 50V CERAMIC CAP	R103	863-02587	15KΩ ±5% 1/4W CARBON FILM RES
C127	822-02417	1μF 50V ELECTROLYTIC	R104	863-02492	150KΩ ±5% 1/4W CARBON FILM RES
C201	822-02379	4700pF ±20% 50V CERAMIC CAP	R105	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C202	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R106	863-02584	330Ω ±5% 1/4W CARBON FILM RES
C203	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R107	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
C204	822-02496	1000pF ±20% 50V CERAMIC CAP	R108	863-02464	220Ω ±5% 1/4W CARBON FILM RES
C205	822-02379	4700pF ±20% 50V CERAMIC CAP	R109	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C206	822-02931	0.01μF +100-0% 50V CERAMIC CAP	R110	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
C207	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R111	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C208	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R112	863-02465	390Ω ±5% 1/4W CARBON FILM RES
C209	822-02417	1μF 50V ELECTROLYTIC	R113	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C210	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R114	863-02463	100Ω ±5% 1/4W CARBON FILM RES
C211	822-02584	330pF ±5% 50V CERAMIC CAP	R115	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
C212	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R116	863-02478	8200Ω ±5% 1/4W CARBON FILM RES
C213	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R117	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
C214	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R118	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C215	822-02405	10μF 16V ELECTROLYTIC	R119	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C216	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R120	863-02588	68KΩ ±5% 1/4W CARBON FILM RES
C217	822-02408	220μF 16V ELECTROLYTIC	R121	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
C218	822-02417	1μF 50V ELECTROLYTIC	R122	863-02466	470Ω ±5% 1/4W CARBON FILM RES
C219	822-02417	1μF 50V ELECTROLYTIC	R123	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
C220	822-02523	220μF 35V ELECTROLYTIC	R124	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
C301	822-02513	470pF ±5% 50V POLYSTYRENE CAP	R201	863-02466	470Ω ±5% 1/4W CARBON FILM RES
C302	822-02529	1μF 25V ELECTROLYTIC	R202	863-02585	680Ω ±5% 1/4W CARBON FILM RES
C303	822-02530	0.33μF 25V ELECTROLYTIC	R203	863-02470	1800Ω ±5% 1/4W CARBON FILM RES
C305	822-02580	0.047μF ±5% 50V MYLAR CAP	R204	863-02465	390Ω ±5% 1/4W CARBON FILM RES
C306	822-02505	0.0068μF ±5% 50V MYLAR CAP	R205	863-02584	330Ω ±5% 1/4W CARBON FILM RES
C307	822-02593	4.7μF 50V ELECTROLYTIC	R206	863-02584	330Ω ±5% 1/4W CARBON FILM RES
C308	022-02577	0.012μF ±5% 50V MYLAR CAP (PART OF REF. NO. 96 804-725 PCB ASSEMBLY)	R207	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
C356	822-02505	0.0068μF ±5% 50V MYLAR CAP	R208	863-03048	22KΩ ROTARY METER CONTROL
C357	822-02593	4.7μF 50V ELECTROLYTIC	R209	863-02481	18KΩ ±5% 1/4W CARBON FILM RES
C358	822-02577	0.012μF ±5% 50V MYLAR CAP (PART OF REF. NO. 96 804-725 PCB ASSEMBLY)	R210	863-02477	6800Ω ±5% 1/4W CARBON FILM RES
C519	822-02497	0.022μF +80-20% 50V CERAMIC CAP	R211	863-03005	47KΩ ROTARY FM MUTE CONTROL
C520	822-02523	220μF 35V ELECTROLYTIC	R212	863-02476	5600Ω ±5% 1/4W CARBON FILM RES
C521	822-02523	220μF 35V ELECTROLYTIC	R213	863-02479	10KΩ ±5% 1/4W CARBON FILM RES
C522	822-02523	220μF 35V ELECTROLYTIC	R214	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C523	822-02590	470μF 35V ELECTROLYTIC	R215	863-02466	470Ω ±5% 1/4W CARBON FILM RES
C901	822-02593	4.7μF 50V ELECTROLYTIC	R216	863-02688	680KΩ ±5% 1/4W CARBON FILM RES
C902	822-02568	47pF ±5% 50V CERAMIC CAP	R301	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
C903	822-02414	100μF 25V ELECTROLYTIC	R302	863-02481	18KΩ ±5% 1/4W CARBON FILM RES
C904	822-02583	220pF ±5% 50V CERAMIC CAP	R303	863-02701	4700Ω ROTARY MULTIPLEX DEMODULATOR CONTROL
C905	822-02588	100μF 6.3V ELECTROLYTIC	R304	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
C906	822-02413	10μF 25V ELECTROLYTIC	R305	863-02474	3300Ω ±5% 1/4W CARBON FILM RES
C907	822-02502	0.0027μF ±5% 50V MYLAR CAP	R306	863-02476	5600Ω ±5% 1/4W CARBON FILM RES
C908	822-02582	8200pF ±5% 50V MYLAR CAP	R307	863-02470	1800Ω ±5% 1/4W CARBON FILM RES
C909	822-02414	100μF 25V ELECTROLYTIC	R308	863-02586	3900Ω ±5% 1/4W CARBON FILM RES
C910	822-02570	100pF ±5% 50V CERAMIC CAP	R309	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C951	822-02593	4.7μF 50V ELECTROLYTIC	R310	863-02477	6800Ω ±5% 1/4W CARBON FILM RES
C952	822-02568	47pF ±5% 50V CERAMIC CAP	R311	863-02468	820Ω ±5% 1/4W CARBON FILM RES
C953	822-02414	100μF 25V ELECTROLYTIC	R312	863-02474	3300Ω ±5% 1/4W CARBON FILM RES
C954	822-02583	220pF ±5% 50V CERAMIC CAP	R313	863-03005	47KΩ ROT'RY FM SEPRATION C'NTROL
C955	822-02588	100μF 6.3V ELECTROLYTIC	R315	863-02492	150KΩ ±5% 1/4W CARBON FILM RES
C956	822-02413	10μF 25V ELECTROLYTIC	R358	863-02586	3900Ω ±5% 1/4W CARBON FILM RES
C957	822-02502	0.0027μF ±5% 50V MYLAR CAP	R359	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C958	822-02582	8200pF ±5% 50V MYLAR CAP	R360	863-02477	6800Ω ±5% 1/4W CARBON FILM RES
C960	822-02570	100pF ±5% 50V CERAMIC CAP	R361	863-02468	820Ω ±5% 1/4W CARBON FILM RES
IC201	905-00143	FM IF INTEGRATED CIRCUIT	R362	863-02474	3300Ω ±5% 1/4W CARBON FILM RES
IC301	905-00135	FM MULTIPLEX DECODER INTEGRATED	R407	863-02467	560Ω ±5% 1/4W CARBON FILM RES
IC901	905-00136	R. CHANNEL PHONO EQUALIZER IC	R423	863-02685	18KΩ ±5% 1/4W CARBON FILM RES
IC951	905-00136	L. CHANNEL PHONO EQUALIZER IC	R457	863-02467	560Ω ±5% 1/4W CARBON FILM RES
LFP301	905-00157	R.CHANNEL FM LOW PASS FILTER	R473	863-02685	18KΩ ±5% 1/4W CARBON FILM RES
LFP351	905-00157	L. CHANNEL FM LOW PASS FILTER	R507	863-02473	2700Ω ±5% 1/4W CARBON FILM RES
L001	820-01179	FM ANTENNA COIL	R901	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
L002	820-01199	FM RF COIL	R902	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
			R903	863-02488	100KΩ ±5% 1/4W CARBON FILM RES

AUDIO MODEL MC7031W (Cont')

REF NO	PART NO	DESCRIPTION
R904	863-02494	1M Ω \pm 5% 1/4W CARBON FILM RES
R905	863-02585	680 Ω \pm 5% 1/4W CARBON FILM RES
R906	863-02475	4700 Ω \pm 5% 1/4W CARBON FILM RES
R907	863-02678	82 Ω \pm 5% 1/4W CARBON FILM RES
R908	863-02483	27K Ω \pm 5% 1/4W CARBON FILM RES
R909	863-02694	330K Ω \pm 5% 1/4W CARBON FILM RES
R910	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R911	863-02463	100 Ω \pm 5% 1/4W CARBON FILM RES
R912	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R951	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES
R952	863-02488	100K Ω \pm 5% 1/4W CARBON FILM RES
R953	863-02488	100K Ω \pm 5% 1/4W CARBON FILM RES
R954	863-02494	1M Ω \pm 5% 1/4W CARBON FILM RES
R955	863-02585	680 Ω \pm 5% 1/4W CARBON FILM RES
R956	863-02475	4700 Ω \pm 5% 1/4W CARBON FILM RES
R957	863-02678	82 Ω \pm 5% 1/4W CARBON FILM RES
R958	863-02483	27K Ω \pm 5% 1/4W CARBON FILM RES
R959	863-02694	330K Ω \pm 5% 1/4W CARBON FILM RES
R960	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R962	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
T101	820-01148	AM OSCILLATOR COIL
T102	895-01068	AM IF TRANSFORMER
T103	895-01048	AM IF TRANSFORMER (WHITE)
T104	895-01049	AM IF TRANSFORMER (BLACK)
T201	895-01062	FM IF TRANSFORMER
T202	895-01067	FM IF TRANSFORMER
Y201	905-00145	10.7 MHZ CERAMIC FILTER
Y202	905-00145	10.7 MHZ CERAMIC FILTER
Y203	905-00145	10.7 MHZ CERAMIC FILTER
0094	NON STOCK	TUNER PRINTED CIRCUIT BOARD

PREAMPLIFIER PRINTED CIRCUIT BOARD COMPONENTS

C019	822-02491	15pF \pm 5% 50V CERAMIC CAP
C402	822-02935	0.12 μ F \pm 5% 50V MYLAR CAP
C403	822-02610	1 μ F \pm 20% 50V ELECTROLYTIC
C404	822-02933	470pF \pm 5% 50V CERAMIC CAP
C405	822-02491	15pF \pm 5% 50V CERAMIC CAP
C406	822-02934	33 μ F 35V ELECTROLYTIC
C407	822-02587	33 μ F 6.3V ELECTROLYTIC
C408	822-02934	33 μ F 35V ELECTROLYTIC
C409	822-02507	0.015 μ F \pm 5% 50V MYLAR CAP
C410	822-02578	0.068 μ F \pm 5% 50V MYLAR CAP
C411	822-02500	0.001 μ F \pm 5% 50V MYLAR CAP
C412	822-02582	8200pF \pm 5% 50V MYLAR CAP
C413	822-02577	0.012 μ F \pm 5% 50V MYLAR CAP
C414	822-02576	4700pF \pm 5% 50V MYLAR CAP
C452	822-02935	0.12 μ F \pm 5% 50V MYLAR CAP
C453	822-02610	1 μ F \pm 20% 50V ELECTROLYTIC
C454	822-02933	470pF \pm 5% 50V CERAMIC CAP
C455	822-02491	15pF \pm 5% 50V CERAMIC CAP
C456	822-02934	33 μ F 35V ELECTROLYTIC
C457	822-02587	33 μ F 6.3V ELECTROLYTIC
C458	822-02934	33 μ F 35V ELECTROLYTIC
C459	822-02507	0.015 μ F \pm 5% 50V MYLAR CAP
C460	822-02578	0.068 μ F \pm 5% 50V MYLAR CAP
C461	822-02500	0.001 μ F \pm 5% 50V MYLAR CAP
C462	822-02582	8200pF \pm 5% 50V MYLAR CAP
C463	822-02577	0.012 μ F \pm 5% 50V MYLAR CAP
C464	822-02576	4700pF \pm 5% 50V MYLAR CAP
Q401	921-01103	R. CH TONE CONTROL AMP TRANS NPN
Q402	921-01103	R. CH 1ST AUDIO PREAMP TRANS NPN
Q451	921-01103	L. CH TONE CONTROL AMP TRANS NPN
Q452	921-01103	L. CH 1ST AUDIO PREAMP TRANS NPN
R401	863-02479	10K Ω \pm 5% 1/4W CARBON FILM RES
R402	863-02475	4700 Ω \pm 5% 1/4W CARBON FILM RES
R403	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R404	863-03109	100K Ω DUAL TAPP'D ROT'RY VOL CONT.
R405	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R406	863-03046	250K Ω DUAL ROTARY CONTROL-BAL
R408	863-02592	470K Ω \pm 5% 1/4W CARBON FILM RES
R409	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R410	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES
R411	863-02714	39K Ω \pm 5% 1/4W CARBON FILM RES
R412	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES
R413	863-02482	22K Ω \pm 5% 1/4W CARBON FILM RES
R414	863-03047	100K Ω DUAL ROTARY BASS CONTROL
R415	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R416	863-02480	12K Ω \pm 5% 1/4W CARBON FILM RES
R417	863-03047	100K Ω DUAL ROT'RY TREBLE C'NTROL
R418	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R419	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R420	863-02592	470K Ω \pm 5% 1/4W CARBON FILM RES
R421	863-03049	1500 Ω \pm 5% 1/4W CARBON FILM RES
R422	863-02486	56K Ω \pm 5% 1/4W CARBON FILM RES
R451	863-02479	10K Ω \pm 5% 1/4W CARBON FILM RES
R452	863-02475	4700 Ω \pm 5% 1/4W CARBON FILM RES
R453	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R455	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R458	863-02592	470K Ω \pm 5% 1/4W CARBON FILM RES
R459	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R460	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES
R461	863-02714	39K Ω \pm 5% 1/4W CARBON FILM RES
R462	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES
R463	863-02482	22K Ω \pm 5% 1/4W CARBON FILM RES
R465	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R466	863-02480	12K Ω \pm 5% 1/4W CARBON FILM RES

REF NO	PART NO	DESCRIPTION
R468	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R469	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R470	863-02592	470K Ω \pm 5% 1/4W CARBON FILM RES
R472	863-02486	56K Ω \pm 5% 1/4W CARBON FILM RES
S002	885-00580	FM AFC PUSH SWITCH
S003	885-00580	FM MUTE PUSH SWITCH
S004	885-00580	LOUDNESS PUSH SWITCH
S005	885-00594	MODE(STEREO-MONO) PUSH SWITCH
S006	885-00594	HI-FILTER PUSH SWITCH
S007	885-00594	LO-FILTER PUSH SWITCH
S008	885-00580	MONITOR(SOURCE-TAPE) SWITCH
0093	NON STOCK	ROTARY SPEAKER SELECT SWITCH
		PCB ASSEMBLY

POWER AMPLIFIER PRINTED CIRCUIT BOARD COMPONENTS

CR1401	903-00364	12 VOLT 1 WATT ZENER DIODE
CR1402	903-00384	R. CHANNEL AMPLIFIER BIAS DIODE
CR1403	903-00384	R.CHANNEL AMPLIFIER BIAS DIODE
CR1404	903-00384	R.CHANNEL AMPLIFIER BIAS DIODE
CR1451	903-00364	12 VOLT 1 WATT ZENER DIODE
CR1452	903-00384	L. CHANNEL AMPLIFIER BIAS DIODE
CR1453	903-00384	L. CHANNEL AMPLIFIER BIAS DIODE
CR1454	903-00384	L. CHANNEL AMPLIFIER BIAS DIODE
CR501	903-00428	RECTIFIER DIODE
CR502	903-00428	RECTIFIER DIODE
CR503	903-00379	RECTIFIER DIODE
CR504	903-00379	RECTIFIER DIODE
CR505	903-00379	RECTIFIER DIODE
CR506	903-00379	RECTIFIER DIODE
CR508	903-00382	RECTIFIER DIODE
CR515	903-00382	RECTIFIER DIODE
C1401	822-02524	0.47 μ F 50V ELECTROLYTIC
C1402	822-02584	330pF \pm 5% 50V CERAMIC CAP
C1403	822-02417	1 μ F 50V ELECTROLYTIC
C1404	822-02406	47 μ F 16V ELECTROLYTIC
C1405	822-02569	68pF \pm 5% 50V CERAMIC CAP
C1406	822-02626	120pF \pm 5% 50V CERAMIC CAP
C1407	822-02366	3pF \pm 0.25pF 50V CERAMIC CAP
C1408	822-02517	47 μ F 25V ELECTROLYTIC
C1409	822-02936	0.1 μ F 50V MYLAR CAP
C1410	822-02931	0.01 μ F \pm 100-0% 50V CERAMIC CAP
C1411	822-02931	0.01 μ F \pm 100-0% 50V CERAMIC CAP
C1412	822-02936	0.1 μ F 50V MYLAR CAP
C1414	822-02931	0.01 μ F \pm 100-0% 50V CERAMIC CAP
C1451	822-02524	0.47 μ F 50V ELECTROLYTIC
C1452	822-02584	330pF \pm 5% 50V CERAMIC CAP
C1453	822-02417	1 μ F 50V ELECTROLYTIC
C1454	822-02406	47 μ F 16V ELECTROLYTIC
C1455	822-02569	68pF \pm 5% 50V CERAMIC CAP
C1456	822-02626	120pF \pm 5% 50V CERAMIC CAP
C1457	822-02366	3pF \pm 0.25pF 50V CERAMIC CAP
C1458	822-02517	47 μ F 25V ELECTROLYTIC
C1459	822-02936	0.1 μ F 50V MYLAR CAP
C1460	822-02931	0.01 μ F \pm 100-0% 50V CERAMIC CAP
C1461	822-02931	0.01 μ F \pm 100-0% 50V CERAMIC CAP
C1462	822-02936	0.1 μ F 50V MYLAR CAP
C1463	822-02417	1 μ F 50V ELECTROLYTIC
C1464	822-02931	0.01 μ F \pm 100-0% 50V CERAMIC CAP
C304	822-02524	0.47 μ F 50V ELECTROLYTIC
C401	822-02932	390pF \pm 5% 50V CERAMIC CAP
C451	822-02932	390pF \pm 5% 50V CERAMIC CAP
C501	822-02686	0.047 μ F \pm 80-20% 50V CERAMIC CAP
C502	822-02686	0.047 μ F \pm 80-20% 50V CERAMIC CAP
C503	822-02408	220 μ F 16V ELECTROLYTIC
C504	822-02408	220 μ F 16V ELECTROLYTIC
C505	822-02497	0.022 μ F \pm 80-20% 50V CERAMIC CAP
C506	822-02497	0.022 μ F \pm 80-20% 50V CERAMIC CAP
C507	822-02408	220 μ F 16V ELECTROLYTIC
C508	822-02408	220 μ F 16V ELECTROLYTIC
C509	822-02685	470 μ F 25V ELECTROLYTIC
C510	822-02685	470 μ F 25V ELECTROLYTIC
C511	822-02497	0.022 μ F \pm 80-20% 50V CERAMIC CAP
C512	822-02497	0.022 μ F \pm 80-20% 50V CERAMIC CAP
C513	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP
C514	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP
C515	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP
C516	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP
Q1401	921-01103	R.CH DIFFERENTIAL AMP TRANS NPN
Q1402	921-01102	R. CHANNEL BIAS TRANSISTOR PNP
Q1403	921-01102	R. CHANNEL BIAS TRANSISTOR PNP
Q1404	921-01103	R.CH 2ND DIFF'R'NT'L AMP TRANS NPN
Q1405	921-01104	R.CHANNEL PREDRIVER TRANS PNP
Q1406	921-01187	R.CHANNEL BIAS TRANSISTOR NPN
Q1407	921-01063	R.CHANNEL 1ST TEMPERATURE COMPENSATION TRANS NPN
Q1408	921-01102	R. CHANNEL 2ND TEMPERATURE COMPENSATION TRANSISTOR NPN
Q1409	921-01187	R.CHANNEL DRIVER TRANSISTOR NPN
Q1410	921-01104	R. CHANNEL DRIVER TRANSISTOR PNP
Q1411	921-01100	R.CH POWER OUTPUT TRANS NPN
Q1412	921-01101	R.CH POWER OUTPUT TRANS PNP
Q1451	921-01103	L.CH DIFFERENTIAL AMP TRANS NPN
Q1452	921-01102	L.CHANNEL BIAS TRANSISTOR PNP
Q1453	921-01102	L.CHANNEL BIAS TRANSISTOR PNP
Q1454	921-01103	L.CH 2ND DIF'L AMP TRANS NPN

AUDIO MODEL MC7031W (Cont')

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
Q1455	921-01104	L.CHAN PREDRIVER TRANSISTOR PNP	R1463	863-03110	270Ω ±5% 1/4W CARBON FILM RES
Q1456	921-01187	L.CHANNEL BIAS TRANSISTOR NPN	R1464	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
Q1457	921-01063	L.CH 1ST TEMP COMP TRANS NPN	R1465	863-02680	1500Ω ±5% 1/2W CARBON FILM RES
Q1458	921-01102	L.CH 2ND TEMP COMP TRANS NPN	R1466	863-02468	820Ω ±5% 1/4W CARBON FILM RES
Q1459	921-01187	L.CHANNEL DRIVER TRANSISTOR NPN	R1467	863-02468	820Ω ±5% 1/4W CARBON FILM RES
Q1460	921-01104	L.CHANNEL DRIVER TRANSISTOR PNP	R1468	863-02456	220Ω ±5% 1/2W CARBON FILM RES
Q1461	921-01100	L.CH POWER OUTPUT TRANS NPN	R1469	863-02464	220Ω ±5% 1/4W CARBON FILM RES
Q1462	921-01101	L.CHAN POWER OUTPUT TRANS PNP	R1470	863-02464	220Ω ±5% 1/4W CARBON FILM RES
Q501	921-01106	VOLTAGE REGULATOR TRANS NPN	R1471	863-02456	220Ω ±5% 1/2W CARBON FILM RES
Q502	921-01107	VOLTAGE REGULATOR TRANS PNP	R1472	863-02690	0.27Ω ±5% 2W METAL FILM RES
R1401	863-02593	560KΩ ±5% 1/4W CARBON FILM RES	R1473	863-02690	0.27Ω ±5% 2W METAL FILM RES
R1402	863-02591	82KΩ ±5% 1/4W CARBON FILM RES	R1474	863-02693	10Ω ±10% 1W METAL FILM RES
R1403	863-02469	1KΩ ±5% 1/4W CARBON FILM RES	R1475	863-02689	6.8Ω ±5% 1W WIREWOUND RES
R1404	863-02677	200Ω ±5% 1/2W CARBON FILM RES	R501	863-02691	27Ω ±10% 1W METAL FILM RES
R1405	863-02479	10KΩ ±5% 1/4W CARBON FILM RES	R502	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
R1406	863-02677	200Ω ±5% 1/2W CARBON FILM RES	R503	863-02725	270Ω ±10% 1W METAL FILM RES
R1407	863-02471	2200Ω ±5% 1/4W CARBON FILM RES	R504	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
R1408	863-02470	1800Ω ±5% 1 4W CARBON FILM RES	R507	863-02473	2700Ω ±5% 1/4W CARBON FILM RES
R1409	863-02591	82KΩ ±5% 1/4W CARBON FILM RES	R509	863-02707	22Ω ±5% 1/2W CARBON FILM RES
R1410	863-02676	68Ω ±5% 1/2W CARBON FILM RES	R510	863-02473	2700Ω ±5% 1/4W CARBON FILM RES
R1411	863-02469	1KΩ ±5% 1/4W CARBON FILM RES	0095	NON STOCK	AUDIO PRINTED CIRCUIT BOARD
R1412	863-02856	470Ω ROTARY R.CH BIAS CONTROL	0091 804-729 LED PRINTED CIRCUIT BD ASSEMBLY COMPONENTS		
R1413	863-03110	270Ω ±5% 1/4W CARBON FILM RES			
R1414	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	CR302	903-00385	GREEN STEREO INDICATOAPE)
R1415	863-02680	1500Ω ±5% 1/2W CARBON FILM RES	CR510	903-00386	RED FUNCTION INDICATOR LED (AUX)
R1416	863-02468	820Ω ±5% 1/4W CARBON FILM RES	CR511	903-00386	RED FUNCT'N INDICATOR LED (PHONO)
R1417	863-02468	820Ω ±5% 1/4W CARBON FILM RES	CR512	903-00386	RED FUNCTION INDICATOR LED (FM)
R1418	863-02456	220Ω ±5% 1/2W CARBON FILM RES	CR513	903-00386	RED FUNCTION INDICATOR LED (AM)
R1419	863-02464	220Ω ±5% 1/4W CARBON FILM RES	PARTS NOT REFERENCED ON EXPLODED VIEW:		
R1420	863-02464	220Ω ±5% 1/4W CARBON FILM RES			
R1421	863-02456	220Ω ±5% 1/2W CARBON FILM RES	202-04403	OPERATING GUIDE, INSTRUCT'N BOOK	
R1422	863-02690	0.27Ω ±5% 2W METAL FILM RES	926-00385	SHIELD (USED ON REF. NO. T103 & T104	
R1423	863-02690	0.27Ω ±5% 2W METAL FILM RES	IF TRANSFORMER		
R1424	863-02693	10Ω ±10% 1W METAL FILM RES			
R1425	863-02689	6.8Ω ±5% 1W WIREWOUND RES			
R1451	863-02593	560KΩ ±5% 1/4W CARBON FILM RES			
R1452	863-02591	82KΩ ±5% 1/4W CARBON FILM RES	812-01293	CABINET BRACKET	
R1453	863-02469	1KΩ ±5% 1/4W CARBON FILM RES	893-01157	WASHER, 1.5MM (4 REQ.)	
R1454	863-02677	200Ω ±5% 1/2W CARBON FILM RES	886-00344	TERMINAL	
R1455	863-02479	10KΩ ±5% 1/4W CARBON FILM RES			
R1456	863-02677	200Ω ±5% 1/2W CARBON FILM RES			
R1457	863-02471	2200Ω ±5% 1/4W CARBON FILM RES			
R1458	863-02470	1800Ω ±5% 1 4W CARBON FILM RES			
R1459	863-02591	82KΩ ±5% 1/4W CARBON FILM RES			
R1460	863-02676	68Ω ±5% 1/2W CARBON FILM RES			
R1461	863-02469	1KΩ ±5% 1/4W CARBON FILM RES			
R1462	863-02856	470Ω ROTARY L.CH BIAS CONTROL			

PRODUCTION CHANGES

EARLY PRODUCTION			LATE PRODUCTION		
REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
Q501	921-01106	VOLTAGE REGULATOR, NPN	Q501	921-01167	VOLTAGE REGULATOR, NPN
R309	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	R309	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
R359	863-02475	4700Ω +5% 1/4W CARBON FILM RES	R359	863-02471	2200Ω ±5% 1/4W CARBON FILM RES

AUDIO MODEL MC7041

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
CABINET COMPONENTS					
	20204404	INSTRUCTION BOOK	0053	926-00356	TUNING CAPACITOR SHIELD
CR507	903-00382	RECTIFIER DIODE	0054	926-00384	TUNING ASSEMBLY SHIELD
CR508	903-00382	RECTIFIER DIODE	0055	874-00053	VENTILATION SCREEN
C517	822-02632	6800 μ F 35V ELECTROLYTIC	0056	861-00481	VARIABLE TUNING CAPACITOR
C518	822-02632	6800 μ F 35V ELECTROLYTIC	0057	880-01287	DIAL CORD TENSION SPRING
C911	822-02698	39pF \pm 5% 50V CERAMIC CAP	0058	893-01182	CABINET RETAINING WASHER(4 REQ.)
C961	822-02698	39pF \pm 5% 50V CERAMIC CAP	0059	886-00329	CHASSIS GROUND LUG
DS501	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0060	861-00447	12x4.2MM PULLEY(2 REQ.)
DS502	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0061	825-00064	PULLEY RETAINING PIN (4 USED)
DS503	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0062	861-00482	CORD PULLEY GUIDE(2 USED)
DS504	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0063	912-02188	3MM SCREW (MTS. REF. NO. 44)
F1401	936-00070	R CH 3.5 AMP SPKR PROTECTION FUSE	0064	854-00319	3MM NUT (USED WITH REF. NO. 63)
F1451	936-00070	L CH 3.5 AMP SPKR PROTECTION FUSE	0065	897-00310	PHONO GND POST (PT OF REF. NO. 88)
F501	936-00071	0.5 AMP SLO-BLO PIGTAIL FUSE	0066	912-02190	JACK CLUSTER MTG SCREW(6 REQ.)
F502	936-00068	2 AMP PIGTAIL FUSE	0067	893-01093	8MM LOCKWSHR (USED ON REF NO 65)
F503	936-00081	5 AMP PIGTAIL FUSE	0068	854-00345	6.35MM NUT (USED ON REF. NO. 65)
F504	936-00081	5 AMP PIGTAIL FUSE	0069	912-02149	3x6MM SCREW(16 REQ.)
J001	844-00224	HEADPHONE JACK	0070	912-02150	3x8MM SCREW (2 MT REF.NO. 22)
L111	820-01147	AM ANTENNA COIL	0071	912-02151	3x10MM SCREW(2 REQ.)
M101	922-00067	FM TUNING METER	0072	912-02154	3x15MM TSTR MTG SCREW (8 REQ.)
M102	922-00062	AM SIGNAL METER	0073	912-02159	3x8MM SCREW (4 MT. REF. NO. 97)
P501	811-00218	AC LINE CORD	0074	912-02208	3x10MM SCREW(16 REQ.)
Q503	921-01168	PHONO EQUALIZER 1ST VOLTAGE	0075	912-02383	2.6x10MM SCREW (2 MT. REF. NO. 96)
		REGULATOR TRANSISTOR NPN	0076	912-02185	2.6x4MM SCREW (2 MT. REF. NO. 95)
Q504	921-01167	PHONO EQUALIZER 2ND VOLTAGE	0077	912-02181	3x6MM SCREW (34 REQ.)
		REGULATOR TRANSISTOR NPN	0078	912-02241	3x12MM SCREW (4 USED)
R1428	863-02692	330 Ω \pm 10% 1W METAL FILM RES	0079	912-02203	3x8MM SCREW (RETAINS REF. NO. 42.)
R1478	863-02692	330 Ω \pm 10% 1W METAL FILM RES	0080	912-02374	4x16MM SCREW (4 REQ.)
R512	863-02458	2.2M Ω \pm 5% 1/2W LINE ISOLATION RES	0081	912-02373	4x8MM SCREW (1 U/O EA REF. NO. 87)
R913	863-02496	3.3M Ω \pm 5% 1/4W CARBON FILM RES	0082	912-02375	4x12MM SCREW (4 REQ.)
R914	863-02721	1.2M Ω \pm 5% 1/4W CARBON FILM RES	0083	912-02379	3x6MM SCREW (4 MT REF. NO. 33)
R963	863-02496	3.3M Ω \pm 5% 1/4W CARBON FILM RES	0084	854-00348	3MM HEX HEAD NUT (4 USED)
R964	863-02721	1.2M Ω \pm 5% 1/4W CARBON FILM RES	0085	854-00346	2.6MM NUT (2 USED WITH REF. NO. 83)
S001	885-00627	ROTARY FUNCTION SWITCH (AM, FM, PHONO, & AUX)	0086	912-02191	3x8MM SCREW (2 MT FRONT PANEL)
S009	885-00615	ROTARY SPKR SELECT SWI (A, B, A+B)	0087	966-00109	CABINET FOOT (4 REQ.)
S501	885-00577	AC POWER LEVER SWITCH	0088-A	886-00363	MAGNETIC PHONO GROUND STUD
T501	895-01109	POWER TRANSFORMER	0088-B	893-01215	TOOTHED WSHR (USED ON REF NO 88)
0001	814-01032	WOOD CABINET	0094	804-00725	DE-EMPHASIS CIRCUIT BOARD (WITH COMPONENTS)
0002	804-00605	CHASSIS BOTTOM (COVER)	0095	885-00578	DE-EMPHASIS SLIDE SWITCH (PART OF REF. NO. 94)
0003	857-01680	FRONT PANEL	0096	878-00115	A C SOCKET
0004	804-00751	CHASSIS REAR(REAR MTG. PLATE)	0097	844-00221	SPEAKER QUICK-CONNECT TERMINAL)
0005	804-00752	CHASS FRONT (FRONT MTG. BRACKET)	TUNER PRINTED CIRCUIT BOARD COMPONENTS		
0006	846-01044	TUNING KNOB	CR001	903-00345	FM AFC DIODE
0007	846-01094	CONT. KNOB (SPKR & FUNCT'N 2 REQ)	CR101	903-00418	AM IF DIODE
0008	846-01097	CONTROL KNOB (BASE, TREBLE, BALANCE & VOLUME 4 REQ.)	CR102	903-00418	AM 1ST DETECTOR DIODE
		CONTROL KNOB (8 REQ.)	CR103	903-00418	AM 2ND DETECTOR DIODE
0009	846-01065	DIAL SCALE LENS	CR104	903-00384	AM AGC DIODE
0010	992-00213	TUNING SHAFT RETAINING COVER	CR105	903-00384	AM OVERLOAD DIODE
0011	824-00549	TUNING DIAL SCALE	CR201	903-00430	FM AGC DIODE
0012	826-00207	DIAL SCALE LEFT MTG BRACKET	CR202	903-00430	FM OVERLOAD DIODE
0013	812-01211	DIAL SCALE RIGHT MTG BRACKET	CR203	903-00430	FM SWITCHING DIODE
0014	812-01210	ZENITH NAME PLATE	CR301	903-00418	FM IF DIODE
0015	857-01681	TUNING METER RETAINING STRIP	C001	822-02852	VARIABLE TUNING CAPACITOR
0016	883-01052	TUNING METER MTG BRACKET	C002	822-02930	15pF \pm 5% 50V CERAMIC CAP
0017	812-01212	LED LAMP RETAINING BRACKET	C003	822-02570	100pF \pm 5% 50V CERAMIC CAP
0018	812-01310	LED MTG BRKT (MTS REF NO 89, & 18)	C004	822-02931	0.01 μ F +100-0% 50V CERAMIC CAP
0019	876-00565	TUNING KNOB SHAFT	C005	822-02931	0.01 μ F +100-0% 50V CERAMIC CAP
0020	841-00234	PILOT LAMP HOLDER (4 REQ.)	C006	822-02379	4700pF \pm 20% 50V CERAMIC CAP
0021	998-00054	REFLECTOR	C007	822-02368	10pF \pm 0.5pF 50V CERAMIC CAP
0022	883-01042	LEVER SWITCH MASKING STRIP (8 REQ)	C008	822-02930	15pF \pm 5% 50V CERAMIC CAP
0023	812-01311	POWER SWITCH MTG BRACKET	C009	822-02408	220 μ F 16V ELECTROLYTIC
0024	812-01340	HEAD PHONE JACK MTG BRACKET	C010	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
0025	812-01341	SWITCH BRKT (MTS. REF. NOS S5-S7)	C011	822-02367	7pF \pm 0.5pF 50V CERAMIC CAP
0026	812-01342	SWITCH BRACKET(MTS. S2, S4, & S8)	C012	822-02570	100pF \pm 5% 50V CERAMIC CAP
0027	859-00306	DIAL POINTER	C013	822-02561	0.75pF \pm 0.25pF 50V GIMMICK CAP
0028	859-00307	DIAL POINTER GUIDE	C014	822-02628	18pF \pm 5% 50V CERAMIC CAP
0029	833-00215	CHASSIS MTG FRAME (2 REQ.)	C015	822-02853	9pF \pm 0.25pF 50V CERAMIC CAP
0030	833-00214	POWER TRANSISTOR HEAT SINK	C016	822-02379	4700pF \pm 20% 50V CERAMIC CAP
0031	926-00359	POWER TRANSISTOR HEAT SINK	C017	822-02379	4700pF \pm 20% 50V CERAMIC CAP
0032	926-00360	HEAT SINK	C018	822-02370	33pF \pm 5% 50V CERAMIC CAP
0033	894-00314	POWER TRANSISTOR INSULATING BUSHING (8 REQ.)	C019	822-02931	0.01 μ F +100-0% 50V CERAMIC CAP
0034		SPRING (2 REQ.)	C020	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
0035	880-01223	CAP MTG BRKT (MTS. C517 & C518)	C021	822-02379	4700pF \pm 20% 50V CERAMIC CAP
0036	812-01207	5 LUG TERMINAL STRIP (2 REQ.)	C022	822-02576	4700pF \pm 5% 50V MYLAR CAP
0037	883-01022	2 LUG TERMINAL	C101	822-02367	7pF \pm 0.5pF 50V CERAMIC CAP
0038	886-00335	FILTER CAPACITOR BRACKET(2 REQ.)	C102	822-02586	330pF \pm 5% 50V POLYSTYRENE CAP
0039	812-01208	WIRE TIE STRAP(USED ON AC CORD)	C103	822-02506	0.01 μ F \pm 5% 50V MYLAR CAP
0040	817-00307	AC CORD RETAINING CLAMP	C104	822-02407	100 μ F 16V ELECTROLYTIC
0041	824-00575	SPEAKER FUSE COVER	C105	822-02379	4700pF \pm 20% 50V CERAMIC CAP
0042	862-00005	SPKR FUSE HOLDER (MTS. F1401 & F1451)	C106	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
0043		AM ANTENNA HOLDER	C107	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
0044	841-00226	VINYL SPACE RING (USED ON REF. NO. 46, 812-1209, ANTENNA BRACKET)	C108	822-02417	1 μ F 50V ELECTROLYTIC
0045	947-00126	AM ANTENNA MTG BRACKET	C109	822-02580	0.047 μ F \pm 5% 50V MYLAR CAP
0046	817-00311	DE-EMPHASIS SWITCH BRKT CLAMP	C110	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
0047	883-01036	ANTENNA TERMINAL STRIP	C111	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
0048	844-00223	JACK CLUSTER (PHONO, TAPE & AUX 2 REQ.)	C112	822-02580	0.047 μ F \pm 5% 50V MYLAR CAP
0049		JACK CLUSTER (PHONO MAG. L R)	C113	822-02366	3pF \pm 0.25pF 50V CERAMIC CAP
0050	844-00222	TONE CONTROL MTG BRACKET	C114	822-02500	0.001 μ F \pm 5% 50V MYLAR CAP
0051	812-01240	TUNING CAPACITOR SHIELD	C115	822-02408	220 μ F 16V ELECTROLYTIC
0052	926-00392		C116	822-02931	0.01 μ F +100-0% 50V CERAMIC CAP
			C117	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
			C118	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
			C119	822-02497	0.022 μ F +80-20% 50V CERAMIC CAP
			C120	822-02931	0.01 μ F +100-0% 50V CERAMIC CAP

AUDIO MODEL MC7041 (Cont.)

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
C121	822-02509	0.1μF ±5% 50V MYLAR CAP	R011	863-02684	12KΩ ±5% 1/4W CARBON FILM RES
C122	822-02585	3300pF ±5% 50V MYLAR CAP	R012	863-02683	820Ω ±5% 1/4W CARBON FILM RES
C123	822-02686	0.047μF ±80-20% 50V CERAMIC CAP	R013	863-02681	22Ω ±5% 1/4W CARBON FILM RES
C124	822-02404	4.7μF 16V ELECTROLYTIC	R014	863-02501	100Ω ±5% 1/4W CARBON FILM RES
C125	822-02417	1μF 50V ELECTROLYTIC	R101	863-02463	100Ω ±5% 1/4W CARBON FILM RES
C126	822-02368	10pF ±0.5pF 50V CERAMIC CAP	R102	863-02489	120KΩ ±5% 1/4W CARBON FILM RES
C127	822-02417	1μF 50V ELECTROLYTIC	R103	863-02587	15KΩ ±5% 1/4W CARBON FILM RES
C1404	822-02517	47μF 25V ELECTROLYTIC	R104	863-02492	150KΩ ±5% 1/4W CARBON FILM RES
C1408	822-02517	47μF 25V ELECTROLYTIC	R105	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C1454	822-02517	47μF 25V ELECTROLYTIC	R106	863-02584	330Ω ±5% 1/4W CARBON FILM RES
C1458	822-02517	47μF 25V ELECTROLYTIC	R107	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
C201	822-02379	4700pF ±20% 50V CERAMIC CAP	R108	863-02464	220Ω ±5% 1/4W CARBON FILM RES
C202	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R109	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C203	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R110	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
C204	822-02496	1000pF ±20% 50V CERAMIC CAP	R111	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C205	822-02379	4700pF ±20% 50V CERAMIC CAP	R112	863-02465	390Ω ±5% 1/4W CARBON FILM RES
C206	822-02931	0.01μF ±100-0% 50V CERAMIC CAP	R113	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C207	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R114	863-02463	100Ω ±5% 1/4W CARBON FILM RES
C208	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R116	863-02478	8200Ω ±5% 1/4W CARBON FILM RES
C209	822-02417	1μF 50V ELECTROLYTIC	R117	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
C210	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R118	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C211	822-02584	330pF ±5% 50V CERAMIC CAP	R119	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C212	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R120	863-02588	68KΩ ±5% 1/4W CARBON FILM RES
C213	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R121	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
C214	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R122	863-02466	470Ω ±5% 1/4W CARBON FILM RES
C215	822-02405	10μF 16V ELECTROLYTIC	R124	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
C216	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R201	863-02466	470Ω ±5% 1/4W CARBON FILM RES
C217	822-02408	220μF 16V ELECTROLYTIC	R202	863-02585	680Ω ±5% 1/4W CARBON FILM RES
C218	822-02417	1μF 50V ELECTROLYTIC	R203	863-02470	1800Ω ±5% 1 4W CARBON FILM RES
C219	822-02417	1μF 50V ELECTROLYTIC	R204	863-02465	390Ω ±5% 1/4W CARBON FILM RES
C301	822-02513	470pF ±5% 50V POLYSTYRENE CAP	R205	863-02584	330Ω ±5% 1/4W CARBON FILM RES
C302	822-02530	0.33μF 25V ELECTROLYTIC	R206	863-02584	330Ω ±5% 1/4W CARBON FILM RES
C303	822-02529	1μF 25V ELECTROLYTIC	R208	863-03048	22KΩ ADJUSTABLE RES
C304	822-02524	0.47μF 50V ELECTROLYTIC	R209	863-02481	18KΩ ±5% 1/4W CARBON FILM RES
C305	822-02580	0.047μF ±5% 50V MYLAR CAP	R210	863-02477	6800Ω ±5% 1/4W CARBON FILM RES
C306	822-02505	0.0068μF ±5% 50V MYLAR CAP	R211	863-03005	47KΩ ROTARY FM MUTE CONTROL
C307	822-02593	4.7μF 50V ELECTROLYTIC	R212	863-02476	5600Ω ±5% 1/4W CARBON FILM RES
C308	822-02577	0.012μF ±5% 50V MYLAR CAP	R213	863-02479	10KΩ ±5% 1/4W CARBON FILM RES
C356	822-02505	0.0068μF ±5% 50V MYLAR CAP	R214	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C357	822-02593	4.7μF 50V ELECTROLYTIC	R215	863-02466	470Ω ±5% 1/4W CARBON FILM RES
C358	822-02577	0.012μF ±5% 50V MYLAR CAP	R216	863-02688	680KΩ ±5% 1/4W CARBON FILM RES
C402	822-02935	0.12μF ±5% 50V MYLAR CAP	R302	863-02481	18KΩ ±5% 1/4W CARBON FILM RES
C452	822-02935	0.12μF ±5% 50V MYLAR CAP	R303	863-02701	4.7KΩ ROTARY DEMOD CONTROL
C519	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R305	863-02474	3300Ω ±5% 1/4W CARBON FILM RES
C520	822-02523	220μF 35V ELECTROLYTIC	R306	863-02476	5600Ω ±5% 1/4W CARBON FILM RES
C521	822-02523	220μF 35V ELECTROLYTIC	R307	863-02470	1800Ω ±5% 1 4W CARBON FILM RES
C522	822-02523	220μF 35V ELECTROLYTIC	R308	863-02586	3900Ω ±5% 1/4W CARBON FILM RES
C901	822-02593	4.7μF 50V ELECTROLYTIC	R309	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C902	822-02568	47pF ±5% 50V CERAMIC CAP	R310	863-02477	6800Ω ±5% 1/4W CARBON FILM RES
C903	822-02414	100μF 25V ELECTROLYTIC	R311	863-02468	820Ω ±5% 1/4W CARBON FILM RES
C904	822-02583	220pF ±5% 50V CERAMIC CAP	R312	863-02474	3300Ω ±5% 1/4W CARBON FILM RES
C905	822-02588	100μF 6.3V ELECTROLYTIC	R313	863-03005	47KΩ ROTARY FM SEPARATION CONT
C906	822-02413	10μF 25V ELECTROLYTIC	R315	863-02492	150KΩ ±5% 1/4W CARBON FILM RES
C907	822-02502	0.0027μF ±5% 50V MYLAR CAP	R358	863-02586	3900Ω ±5% 1/4W CARBON FILM RES
C908	822-02582	8200pF ±5% 50V MYLAR CAP	R359	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C909	822-02414	100μF 25V ELECTROLYTIC	R360	863-02477	6800Ω ±5% 1/4W CARBON FILM RES
C910	822-02570	100pF ±5% 50V CERAMIC CAP	R361	863-02468	820Ω ±5% 1/4W CARBON FILM RES
C912	822-02497	0.022μF ±80-20% 50V CERAMIC CAP	R362	863-02474	3300Ω ±5% 1/4W CARBON FILM RES
C951	822-02593	4.7μF 50V ELECTROLYTIC	R429	863-02481	18KΩ ±5% 1/4W CARBON FILM RES
C952	822-02568	47pF ±5% 50V CERAMIC CAP	R479	863-02481	18KΩ ±5% 1/4W CARBON FILM RES
C953	822-02414	100μF 25V ELECTROLYTIC	R480	863-02464	220Ω ±5% 1/4W CARBON FILM RES
C954	822-02583	220pF ±5% 50V CERAMIC CAP	R901	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C955	822-02588	100μF 6.3V ELECTROLYTIC	R905	863-02585	680Ω ±5% 1/4W CARBON FILM RES
C956	822-02413	10μF 25V ELECTROLYTIC	R906	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
C957	822-02502	0.0027μF ±5% 50V MYLAR CAP	R907	863-02678	82Ω ±5% 1/4W CARBON FILM RES
C958	822-02582	8200pF ±5% 50V MYLAR CAP	R908	863-02483	27KΩ ±5% 1/4W CARBON FILM RES
C960	822-02570	100pF ±5% 50V CERAMIC CAP	R909	863-02694	330KΩ ±5% 1/4W CARBON FILM RES
IC201	905-00143	FM IF INTEGRATED CIRCUIT	R910	863-02485	47KΩ ±5% 1/4W CARBON FILM RES
IC301	905-00135	FM MULTIPLEX DECODER I. C.	R911	863-02463	100Ω ±5% 1/4W CARBON FILM RES
IC901	905-00136	R. CHANNEL PHONO EQUALIZER I. C.	R951	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
IC951	905-00136	L. CHANNEL PHONO EQUALIZER I. C.	R955	863-02585	680Ω ±5% 1/4W CARBON FILM RES
LPF301	905-00157	R. CHANNEL FM MULTIPLEX FILTER	R956	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
LPF351	905-00157	L. CHANNEL FM MULTIPLEX FILTER	R957	863-02678	82Ω ±5% 1/4W CARBON FILM RES
L001	820-01179	FM ANTENNA COIL	R958	863-02483	27KΩ ±5% 1/4W CARBON FILM RES
L002	820-01145	FM RF COIL	R959	863-02694	330KΩ ±5% 1/4W CARBON FILM RES
L003	820-01127	2.2UH CHOKE	R960	863-02485	47KΩ ±5% 1/4W CARBON FILM RES
L004	820-01146	FM OSCILLATOR COIL	R961	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
L203	820-01129	18UH COIL	T101	820-01148	AM OSCILLATOR COIL
L204	820-01127	2.2UH CHOKE	T102	895-01068	AM IF TRANSFORMER
Q001	921-01108	FM RF AMPLIFIER TRANSISTOR FET	T103	895-01048	AM IF TRANSFORMER (WHITE)
Q002	921-01059	FM MIXER TRANSISTOR NPN	T104	895-01049	AM IF TRANSFORMER (BLACK)
Q003	921-01059	FM OSCILLATOR TRANSISTOR NPN	T201	895-01062	FM IF TRANSFORMER
Q101	921-01060	AM RF AMPLIFIER-MIXER TSTR NPN	T202	895-01067	FM IF TRANSFORMER
Q102	921-01081	AM 1ST IF TRANSISTOR NPN	Y201	905-00145	10.7 MHZ CERAMIC FILTER
Q103	921-01081	AM 2ND IF TRANSISTOR NPN	Y202	905-00145	10.7 MHZ CERAMIC FILTER
Q201	921-01060	FM 1ST IF TRANSISTOR NPN	Y203	905-00145	10.7 MHZ CERAMIC FILTER
Q301	921-01081	FM STEREO LAMP DRIVER TSTR NPN	0098	804-00730	TUNER PRINTED CIRCUIT BOARD
Q302	921-01102	R.CHAN FM NOISE FILTER TSTR PNP			
Q352	921-01102	L.CHAN FM NOISE FILTER TSTR PNP			
R001	863-02686	100KΩ ±5% 1/4W CARBON FILM RES	C401	822-02937	390pF ±5% 50V CERAMIC CAP
R002	863-02501	100Ω ±5% 1/4W CARBON FILM RES	C403	822-02610	1μF ±20% 50V ELECTROLYTIC
R003	863-02686	100KΩ ±5% 1/4W CARBON FILM RES	C404	822-02570	100pF ±5% 50V CERAMIC CAP
R004	863-02500	47Ω ±5% 1/4W CARBON FILM RES	C405	822-02855	4.7μF 25V ELECTROLYTIC
R005	863-02463	100Ω ±5% 1/4W CARBON FILM RES	C406	822-02501	0.0022μF ±5% 50V MYLAR CAP
R006	863-02687	220KΩ ±5% 1/4W CARBON FILM RES	C407	822-02600	0.033μF ±5% 50V MYLAR CAP
R007	863-02498	3300Ω ±5% 1/4W CARBON FILM RES	C408	822-02600	0.033μF ±5% 50V MYLAR CAP

PREAMPLIFIER CIRCUIT BOARD COMPONENTS

AUDIO MODEL MC7041 (Cont.)

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
C409	822-02855	4.7μF 25V ELECTROLYTIC	CR503	903-00379	RECTIFIER DIODE
C410	822-02568	47pF ±5% 50V CERAMIC CAP	CR504	903-00379	RECTIFIER DIODE
C411	822-02855	4.7μF 25V ELECTROLYTIC	CR505	903-00379	RECTIFIER DIODE
C412	822-02631	0.022μF ±5% 50V MYLAR CAP	CR506	903-00379	RECTIFIER DIODE
C413	822-02577	0.012μF ±5% 50V MYLAR CAP	C019	822-02491	15pF ±5% 50V CERAMIC CAP
C414	822-02517	47μF 25V ELECTROLYTIC	C1401	822-02524	0.47μF 50V ELECTROLYTIC
C451	822-02937	390pF ±5% 50V CERAMIC CAP	C1402	822-02584	330pF ±5% 50V CERAMIC CAP
C453	822-02610	1μF ±20% 50V ELECTROLYTIC	C1403	822-02417	1μF 50V ELECTROLYTIC
C454	822-02570	100pF ±5% 50V CERAMIC CAP	C1405	822-02573	0.01μF ±100-0% 50V CERAMIC CAP
C455	822-02855	4.7μF 25V ELECTROLYTIC	C1406	822-02938	120pF ±5% 50V CERAMIC CAP
C456	822-02501	0.0022μF ±5% 50V MYLAR CAP	C1407	822-02366	3pF ±0.25pF 50V CERAMIC CAP
C457	822-02600	0.033μF ±5% 50V MYLAR CAP	C1409	822-02686	0.047μF ±80-20% 50V CERAMIC CAP
C458	822-02600	0.033μF ±5% 50V MYLAR CAP	C1410	822-02931	0.01μF ±100-0% 50V CERAMIC CAP
C459	822-02855	4.7μF 25V ELECTROLYTIC	C1411	822-02931	0.01μF ±100-0% 50V CERAMIC CAP
C460	822-02568	47pF ±5% 50V CERAMIC CAP	C1412	822-02580	0.047μF ±5% 50V MYLAR CAP
C461	822-02855	4.7μF 25V ELECTROLYTIC	C1414	822-02583	220pF ±5% 50V CERAMIC CAP
C462	822-02631	0.022μF ±5% 50V MYLAR CAP	C1415	822-02583	220pF ±5% 50V CERAMIC CAP
C463	822-02577	0.012μF ±5% 50V MYLAR CAP	C1451	822-02524	0.47μF 50V ELECTROLYTIC
C464	822-02517	47μF 25V ELECTROLYTIC	C1452	822-02584	330pF ±5% 50V CERAMIC CAP
Q401	921-01177	R. CHAN PREAMPLIFIER TSTR NPN	C1453	822-02417	1μF 50V ELECTROLYTIC
Q402	921-01103	R. CH TONE CONTROL AMP TSTR NPN	C1455	822-02573	0.01μF ±100-0% 50V CERAMIC CAP
Q451	921-01177	L. CHAN PREAMPLIFIER TSTR NPN	C1456	822-02938	120pF ±5% 50V CERAMIC CAP
Q452	921-01103	L. CH TONE CONTROL AMP TSTR NPN	C1457	822-02366	3pF ±0.25pF 50V CERAMIC CAP
R401	863-02479	10KΩ ±5% 1/4W CARBON FILM RES	C1459	822-02686	0.047μF ±80-20% 50V CERAMIC CAP
R402	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	C1460	822-02931	0.01μF ±100-0% 50V CERAMIC CAP
R403	863-03053	250KΩ DUAL ROTARY TREB CONTROL	C1461	822-02931	0.01μF ±100-0% 50V CERAMIC CAP
R404	863-02487	1200Ω ±5% 1/4W CARBON FILM RES	C1462	822-02580	0.047μF ±5% 50V MYLAR CAP
R405	863-03111	100KΩ 2 SEC TAPPED VOL CONTROL	C1464	822-02583	220pF ±5% 50V CERAMIC CAP
R406	863-02469	1KΩ ±5% 1/4W CARBON FILM RES	C1465	822-02583	220pF ±5% 50V CERAMIC CAP
R407	863-02493	820KΩ ±5% 1/4W CARBON FILM RES	C501	822-02686	0.047μF ±80-20% 50V CERAMIC CAP
R408	863-02494	1MΩ ±5% 1/4W CARBON FILM RES	C502	822-02686	0.047μF ±80-20% 50V CERAMIC CAP
R409	863-02473	2700Ω ±5% 1/4W CARBON FILM RES	C503	822-02408	220μF 16V ELECTROLYTIC
R410	863-02465	390Ω ±5% 1/4W CARBON FILM RES	C504	822-02408	220μF 16V ELECTROLYTIC
R411	863-03054	100KΩ ROTARY BALANCE CONTROL	C505	822-02497	0.022μF ±80-20% 50V CERAMIC CAP
R412	863-02491	220KΩ ±5% 1/4W CARBON FILM RES	C506	822-02497	0.022μF ±80-20% 50V CERAMIC CAP
R413	863-02471	2200Ω ±5% 1/4W CARBON FILM RES	C507	822-02408	220μF 16V ELECTROLYTIC
R414	863-02480	12KΩ ±5% 1/4W CARBON FILM RES	C508	822-02408	220μF 16V ELECTROLYTIC
R415	863-02480	12KΩ ±5% 1/4W CARBON FILM RES	C509	822-02685	470μF 25V ELECTROLYTIC
R416	863-02479	250KΩ DUAL ROTARY BAL CONTROL	C510	822-02685	470μF 25V ELECTROLYTIC
R417	863-03054	100KΩ DUAL ROTARY BASS CONTROL	C511	822-02497	0.022μF ±80-20% 50V CERAMIC CAP
R418	863-02694	330KΩ ±5% 1/4W CARBON FILM RES	C512	822-02497	0.022μF ±80-20% 50V CERAMIC CAP
R419	863-02476	5600Ω ±5% 1/4W CARBON FILM RES	C513	822-02498	0.01μF ±20% 500V CERAMIC CAP
R420	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	C514	822-02498	0.01μF ±20% 500V CERAMIC CAP
R421	863-02484	33KΩ ±5% 1/4W CARBON FILM RES	C515	822-02498	0.01μF ±20% 500V CERAMIC CAP
R422	863-02491	220KΩ ±5% 1/4W CARBON FILM RES	C516	822-02498	0.01μF ±20% 500V CERAMIC CAP
R423	863-02712	150Ω ±5% 1/4W CARBON FILM RES	Q1401	921-01103	R. CHAN 1ST AUDIO PREAMP TSTR NPN
R424	863-02588	68KΩ ±5% 1/4W CARBON FILM RES	Q1402	921-01102	R. CHANNEL BIAS TRANSISTOR PNP
R425	863-02592	470KΩ ±5% 1/4W CARBON FILM RES	Q1403	921-01102	R. CHANNEL BIAS TRANSISTOR PNP
R426	863-02474	3300Ω ±5% 1/4W CARBON FILM RES	Q1404	921-01103	R. CH. 2ND AUDIO PREAMP TSTR NPN
R427	863-02592	470KΩ ±5% 1/4W CARBON FILM RES	Q1405	921-01104	R. CH. 3RD AUDIO PREAMP TSTR PNP
R430	863-02464	220Ω ±5% 1/4W CARBON FILM RES	Q1406	921-01187	R. CH. 4TH AUDIO PREAMP TSTR NPN
R451	863-02479	10KΩ ±5% 1/4W CARBON FILM RES	Q1407	921-01063	R. CH 1ST AUDIO PREDRIVER TSTR NPN
R452	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	Q1408	921-01102	R. CH 2ND AUDIO PREDRIVER TSTR PNP
R454	863-02487	1200Ω ±5% 1/4W CARBON FILM RES	Q1409	921-01187	R. CHAN. AUDIO DRIVER TSTR NPN
R456	863-02469	1KΩ ±5% 1/4W CARBON FILM RES	Q1410	921-01104	R. CHAN AUDIO DRIVER TSTR PNP
R457	863-02493	820KΩ ±5% 1/4W CARBON FILM RES	Q1411	921-01112	R. CHAN. POWER OUTPUT TSTR NPN
R458	863-02494	1MΩ ±5% 1/4W CARBON FILM RES	Q1412	921-01113	R. CHAN POWER OUTPUT TSTR PNP
R459	863-02473	2700Ω ±5% 1/4W CARBON FILM RES	Q1451	921-01103	L. CH AUDIO PREAMPLIFIER TSTR NPN
R460	863-02465	390Ω ±5% 1/4W CARBON FILM RES	Q1452	921-01102	L. CHANNEL BIAS TRANSISTOR PNP
R462	863-02491	220KΩ ±5% 1/4W CARBON FILM RES	Q1453	921-01102	L. CHANNEL BIAS TRANSISTOR PNP
R463	863-02471	2200Ω ±5% 1/4W CARBON FILM RES	Q1454	921-01103	L. CH. 2ND AUDIO PREAMP TSTR NPN
R464	863-02480	12KΩ ±5% 1/4W CARBON FILM RES	Q1455	921-01104	L. CH. 3RD AUDIO PREAMP TSTR PNP
R465	863-02480	12KΩ ±5% 1/4W CARBON FILM RES	Q1456	921-01187	L. CH. 4TH AUDIO PREAMP TSTR NPN
R466	863-02479	10KΩ ±5% 1/4W CARBON FILM RES	Q1457	921-01063	L. CHAN.AUDIO PREDRIVER TSTR NPN
R468	863-02694	330KΩ ±5% 1/4W CARBON FILM RES	Q1458	921-01102	L. CHAN. AUDIO PREDRIVER TSTR PNP
R469	863-02476	5600Ω ±5% 1/4W CARBON FILM RES	Q1459	921-01187	L. CHAN. AUDIO DRIVER TSTR NPN
R470	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	Q1460	921-01104	L. CHANNEL AUDIO DRIVER TSTR PNP
R471	863-02484	33KΩ ±5% 1/4W CARBON FILM RES	Q1461	921-01112	L CH AUDIO POWER OUTPUT TSTR NPN
R472	863-02491	220KΩ ±5% 1/4W CARBON FILM RES	Q1462	921-01113	L CH AUDIO POWER OUTPUT TSTR PNP
R473	863-02712	150Ω ±5% 1/4W CARBON FILM RES	Q501	921-01106	VOLTAGE REGULATOR TSTR NPN
R474	863-02588	68KΩ ±5% 1/4W CARBON FILM RES	Q502	921-01107	VOLTAGE REGULATOR TSTR PNP
R475	863-02592	470KΩ ±5% 1/4W CARBON FILM RES	R115	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R476	863-02474	3300Ω ±5% 1/4W CARBON FILM RES	R123	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R477	863-02592	470KΩ ±5% 1/4W CARBON FILM RES	R1401	863-02593	560KΩ ±5% 1/4W CARBON FILM RES
R480	863-02464	220Ω ±5% 1/4W CARBON FILM RES	R1402	863-02485	47KΩ ±5% 1/4W CARBON FILM RES
R507	863-02473	2700Ω ±5% 1/4W CARBON FILM RES	R1403	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
R510	863-02473	2700Ω ±5% 1/4W CARBON FILM RES	R1404	863-02677	200Ω ±5% 1/2W CARBON FILM RES
S002	885-00589	FM AFC LEVER SWITCH	R1405	863-02479	10KΩ ±5% 1/4W CARBON FILM RES
S003	885-00589	FM MUTE LEVER SWITCH	R1406	863-02677	200Ω ±5% 1/2W CARBON FILM RES
S004	885-00589	LOUDNESS LEVER SWITCH	R1407	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
S005	885-00589	MODE (MONO-STEREO) LEVER SWITCH	R1408	863-02470	1800Ω ±5% 1/4W CARBON FILM RES
S006	885-00589	HI-FILTER LEVER SWITCH	R1409	863-02485	47KΩ ±5% 1/4W CARBON FILM RES
S007	885-00589	LO-FILTER LEVER SWITCH	R1410	863-02676	68Ω ±5% 1/2W CARBON FILM RES
S008	885-00590	MONITOR (SOURCE-TAPE) LEVER SWI	R1411	863-02469	1KΩ ±5% 1/4W CARBON FILM RES
O091	804-00732	TONE CONTROL PRINTED CIRCUIT BD	R1412	863-02856	470Ω ROTARY R. CHAN. BIAS CONTROL
POWER AMPLIFIER CIRCUIT BOARD COMPONENTS			R1413	863-02459	270Ω ±5% 1/4W CARBON FILM RES
CR1401	903-00364	12 VOLT, 1 WATT ZENER DIODE	R1414	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
CR1402	903-00384	R. CHANNEL BIAS DIODE	R1415	863-02680	1500Ω ±5% 1/2W CARBON FILM RES
CR1403	903-00384	R. CHANNEL BIAS DIODE	R1416	863-02459	270Ω ±5% 1/4W CARBON FILM RES
CR1404	903-00384	R. CHANNEL BIAS DIODE	R1417	863-02459	270Ω ±5% 1/4W CARBON FILM RES
CR1451	903-00364	12 VOLT, 1 WATT ZENER DIODE	R1418	863-02456	220Ω ±5% 1/2W CARBON FILM RES
CR1453	903-00384	L. CHANNEL BIAS DIODE	R1419	863-02462	180Ω ±5% 1/4W CARBON FILM RES
CR1454	903-00384	L. CHANNEL BIAS DIODE	R1420	863-02462	180Ω ±5% 1/4W CARBON FILM RES
CR501	903-00429	RECTIFIER DIODE	R1421	863-02456	220Ω ±5% 1/2W CARBON FILM RES
CR502	903-00429	RECTIFIER DIODE	R1422	863-02690	0.27Ω ±5% 2W METAL FILM RES
			R1423	863-02690	0.27Ω ±5% 2W METAL FILM RES

AUDIO MODEL MC7041 (Cont.)

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
R1424	863-02693	10Ω ±10% 1W METAL FILM RES	R301	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R1425	863-02689	6.8Ω ±5% 1W WIREWOUND RES	R304	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R1451	863-02593	560KΩ ±5% 1/4W CARBON FILM RES	R428	863-02724	1200Ω ±5% 1/2W CARBON FILM RES
R1452	863-02485	47KΩ ±5% 1/4W CARBON FILM RES	R501	863-02691	27Ω ±10% 1W METAL FILM RES
R1453	863-02469	1KΩ ±5% 1/4W CARBON FILM RES	R502	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
R1454	863-02677	200Ω ±5% 1/2W CARBON FILM RES	R503	863-02725	270Ω ±10% 1W METAL FILM RES
R1455	863-02479	10KΩ ±5% 1/4W CARBON FILM RES	R504	863-02475	4700Ω ±5% 1/4W CARBON FILM RES
R1456	863-02677	200Ω ±5% 1/2W CARBON FILM RES	R509	863-03050	22Ω ±5% 1/2W CARBON FILM RES
R1457	863-02471	2200Ω ±5% 1/4W CARBON FILM RES	R902	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R1458	863-02470	1800Ω ±5% 1 4W CARBON FILM RES	R903	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R1459	863-02485	47KΩ ±5% 1/4W CARBON FILM RES	R904	863-02494	1MΩ ±5% 1/4W CARBON FILM RES
R1460	863-02676	68Ω ±5% 1/2W CARBON FILM RES	R952	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R1461	863-02469	1KΩ ±5% 1/4W CARBON FILM RES	R953	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R1462	863-02856	470Ω ROTARY L. CHAN. BIAS CONTROL	R954	863-02494	1MΩ ±5% 1/4W CARBON FILM RES
R1463	863-02459	270Ω ±5% 1/4W CARBON FILM RES	0093	804-00731	AUDIO PRINTED CIRCUIT BOARD
R1464	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	FUNCTION SWITCH CIRCUIT BOARD COMPONENTS		
R1465	863-02680	1500Ω ±5% 1/2W CARBON FILM RES	0089	804-00729	LED CIRCUIT BOARD ASSEMBLY
R1466	863-02459	270Ω ±5% 1/4W CARBON FILM RES	0090	NON STOCK	FUNCTION SWITCH P C BD (PART OF REF. NO. S1 885-627 SWITCH)
R1467	863-02459	270Ω ±5% 1/4W CARBON FILM RES	804-729 LED PRINTED CIRCUIT BOARD COMPONENTS		
R1468	863-02456	220Ω ±5% 1/2W CARBON FILM RES	CR302	903-00385	GREEN STEREO INDICATOR LED
R1469	863-02462	180Ω ±5% 1/4W CARBON FILM RES	CR509	903-00386	RED FUNCTION INDICATOR LED(TAPE)
R1470	863-02462	180Ω ±5% 1/4W CARBON FILM RES	CR510	903-00386	RED FUNCTION INDICATOR LED(AUX)
R1471	863-02456	220Ω ±5% 1/2W CARBON FILM RES	CR511	903-00386	RED FUNCT'N INDICATOR LED(PHONO))
R1472	863-02690	0.27Ω ±5% 2W METAL FILM RES	CR512	903-00386	RED FUNCTION INDICATOR LED(AM)
R1473	863-02690	0.27Ω ±5% 2W METAL FILM RES	R508	863-02470	1800Ω ±5% 1 4W CARBON FILM RES
R1474	863-02693	10Ω ±10% 1W METAL FILM RES			
R1475	863-02689	6.8Ω ±5% 1W WIREWOUND RES			
R207	863-02488	100KΩ ±5% 1/4W CARBON FILM RES			

PRODUCTION CHANGES

EARLY PRODUCTION			LATE PRODUCTION		
REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
Q501	921-01106	VOLTAGE REGULATOR, NPN	Q501	921-01167	VOLTAGE REGULATOR, NPN
R309	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	R309	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
R359	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	R359	863-02471	2200Ω ±5% 1/4W CARBON FILM RES

AUDIO MODEL MC7051

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
CABINET COMPONENTS					
C501	822-02850	8200μF 50V ELECTROLYTIC CAPACITOR	0050	861-00433	TUNING CAPACITOR PULLEY (BLACK)
C502	822-02850	8200μF 50V ELECTROLYTIC CAPACITOR	0051	880-01133	DIAL CORD TENSION SPRING
C517	822-02846	0.0047μF +100-0% 150 AC CER. CAP	0052A	886-00363	SCREW TERM W/BINDING POST (PART OF REF NO 0052B)
C701	822-02497	0.022μF +80-20% 50V CERAMIC CAP	0052B	897-00306	MAGNETIC PHONO GROUND STUD
C751	822-02497	0.022μF +80-20% 50V CERAMIC CAP	0053	883-01067	TUNING SHAFT RETAINING STRIP
DSX501	900-00322	PILOT LAMP, 300MA			RETAINS REF. NO. 24)
DSX502	900-00322	PILOT LAMP, 300MA	0054	854-00345	6.35MM NUT (RETAINS REF NO 118 & REF NO 52B)
DSX503	900-00322	PILOT LAMP, 300MA	0055	844-00222	JACK CLUSTER (INPUT PHONO 1 L & R)
DSX504	900-00322	PILOT LAMP, 300MA	0056	844-00223	JACK CLUSTER (3 REQ.)
DSX505	900-00322	PILOT LAMP, 300MA	0057	883-01114	ANTENNA TERMINAL STRIP
DS501	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0058	817-00307	STRAIN RELIEF CLAMP(USED ON P501)
DS502	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0060	841-00226	AM ANTENNA HOLDER
DS503	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0062	812-01209	AM ANTENNA HOLDER BRACKET
DS504	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0063	912-02188	3MM SCREW(MTS REF. NO. 60, & L101)
DS505	900-00322	PILOT LAMP, 300MA, DIAL SCALE	0064	854-00319	3MM NUT(USED WITH REF. NO. 63)
FX501	936-00069	6 AMP PIGTAIL FUSE	0065	817-00311	DE-EMPHASIS SWITCH BRKT CLAMP
FX502	936-00069	6 AMP PIGTAIL FUSE	0068	912-02190	SPEC'L SCREW (1 USED ON REF NO. 56)
F501	936-00069	6 AMP PIGTAIL FUSE	0069	912-02391	SPECIAL SCREW (4 MT REF. NO. 9)
F502	936-00069	6 AMP PIGTAIL FUSE	0070	886-00329	CHASSIS GROUND LUG
J1401	844-00224	HEADPHONE JACK	0071	912-02179	3×20MM SCREW (8 REQ.)
J1402	844-00221	SPKR QUICK CONNECT (SPKR SYSTEM 'A' LEFT & RIGHT)	0072	912-02185	2.6×4MM SCREW (2 MT REF. NO. S-9)
J1403	844-00221	SPKR QUICK CONNECT (SPKR SYSTEM 'B' LEFT & RIGHT)	0073	912-02192	2.6×10MM SCREW (4 MT J501 & J502)
J501	878-00107	A C SOCKET	0074	912-02191	3×8MM SCREW (2 RETAIN REF. NO. 3)
J502	878-00107	A C SOCKET	0075	912-02203	3×8MM SCREW (5 REQ.)
J701	844-00225	MICROPHONE JACK	0076	912-02373	4×8MM SCREW (6 RETAIN REF. NO. 2)
K701	995-00055	SPEAKER PROTECTION RELAY	0077	912-02374	4×16MM SCREW (4 REQ.)
L001	895-01072	FM BALUN TRANSFORMER	0078	912-02181	3×6MM SCREW (12 REQ.)
L101	820-01151	AM ANTENNA COIL	0079	912-02375	4×12MM SCREW (4 REQ.)
M101	922-00063	TUNING METER	0080	854-00349	2.6MM NUT (2 MTS. EA. J501 & J502)
M102	922-00064	FM TUNING METER	0081	912-02159	3×8MM RND HD SCREW (4 REQ.)
P501	811-00218	AC LINE CORD	0082	912-02157	3×8MM RND HEAD SCREW (60 REQ.)
Q1410	921-01112	R. CHAN POWER AMP TSTR NPN	0084	854-00348	3MM HEX NUT (USED WITH REF NO 81)
Q1411	921-01113	R. CHANNEL POWER AMP TSTR PNP	0085	912-02151	3×10MM RND HEAD SCREW (10 REQ.)
Q1460	921-01112	L. CHANNEL POWER AMP TSTR NPN	0087	912-02149	3×6MM SCREW (1 MTS. EA REF NO 202)
Q1461	921-01113	L. CHANNEL POWER AMP TSTR PNP	0088	893-01213	3.5MM WASHER (2 REQ.)
R512	863-02458	2.2MΩ ±5% 1/2W LINE ISOLATION RES	0096	878-00110	PWR TSTR INSULATING SOCK'T (4 REQ)
R516	863-02866	0.22Ω ±10% 10W WIREWOUND RES	0097	804-00734	DIAL LAMP PRINTED CIRCUIT BOARD
R517	863-02866	0.22Ω ±10% 10W WIREWOUND RES	0101	878-00111	DIAL LAMP SOCKET (4 REQ.)
R901	863-02488	100KΩ ±5% 1/4W CARBON FILM RES	0102	883-01089	PWR TSTR MICA INSULATOR (4 REQ.)
R933	863-02704	150Ω ±10% 2W METAL FILM RES	0115	947-00133	TUNING METER SPACER
R951	863-02488	100KΩ ±5% 1/4W CARBON FILM RES	0116	883-01068	RETAINING STRIP
R983	863-02704	150Ω ±10% 2W METAL FILM RES	0117	912-02241	3×12MM SCREW (4 REQ.)
S010	885-00613	ROTARY SPKR SELECT SW (A, B, A + B)	0118	893-01093	8MM LOCKWASHER
S011	885-00584	AC POWER LEVER SWITCH	0200	859-00305	DIAL POINTER
TX501	895-01073	POWER TRANSFORMER	0201	912-02376	3×10MM SCREW (4 REQ.)
T501	895-01073	POWER TRANSFORMER	0202	926-00357	VOLTAGE REG TSTR HEAT SINK (2 REQ.)
0001	814-01018	WOOD CABINET	TUNER PRINTED CIRCUIT BOARD COMPONENTS		
0002	804-00609	CHASSIS BOTTOM COVER	A001	975-00105	FM TUNER
0003	857-01678	CONTROL PANEL ESCUTCHEON	CR101	903-00350	SIGNAL METER DIODE
0004	826-00212	DIAL SCALE	CR201	903-00350	FM IF DIODE
0005	804-00606	FRONT PANEL MTG BRACKET	CR202	903-00384	FM TUNING METER DIODE
0006	998-00055	DIAL REFLECTOR	CR301	903-00350	FM MULTIPLEX SWITCH DIODE
0007	992-00214	DIAL SCALE LENS	C101	822-02606	1000pF ±10% 50V CERAMIC CAP
0008	804-00607	MAIN CIRCUIT BOARD MTG. FRAME	C102	822-02506	0.01μF ±5% 50V MYLAR CAP
0009	804-00702	BACK PANEL	C103	822-02506	0.01μF ±5% 50V MYLAR CAP
0010	926-00371	POWER AMPLIFIER HEAT SINK	C104	822-02603	0.047μF +80-20% 50V CERAMIC CAP
0011	833-00216	SIDE MTG. FRAMES (2 REQ.)	C105	822-02586	330pF ±5% 50V POLYSTYRENE CAP
0012	846-01094	ROTARY SW KNOB (SPKR'S A, B, A + B & FUNCTION (AM, FM, PHONO & AUX))	C106	822-02606	1000pF ±10% 50V CERAMIC CAP
0013	846-01095	ROTARY KNOB ASSEMBLY(BASS, TREBLE, VOLUME & BALANCE 4 REQ.)	C107	822-02616	3.3μF 50V ELECTROLYTIC
0014	846-01065	LEVER SWITCH KNOB (8 REQ.)	C108	822-02616	3.3μF 50V ELECTROLYTIC
0015	846-01044	TUNING KNOB	C109	822-02506	0.01μF ±5% 50V MYLAR CAP
0016	812-01219	TUNING SCALE LEFT MTG BRACKET	C110	822-02506	0.01μF ±5% 50V MYLAR CAP
0017	812-01218	TUNING SCALE RIGHT MTG BRACKET	C111	822-02506	0.01μF ±5% 50V MYLAR CAP
0018	824-00549	TUNING SCALE COVER	C112	822-02417	1μF 50V ELECTROLYTIC
0019	857-01601	ZENITH NAME PLATE	C113	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0020	861-00447	12×4.2MM DIAL CORD PULLEY	C114	822-02506	0.01μF ±5% 50V MYLAR CAP
0021	841-00229	BRACKET (MTS. REF. NO. 82, LED PCB	C115	822-02398	0.22μF ±10% 25V ELECTROLYTIC
0022	812-01307	LED MTG BRKT (MTS CR512 & CR517)	C116	822-02588	100μF 6.3V ELECTROLYTIC
0023	812-01220	TUNING MTR BRKT (MTS. M101 & M102)	C117	822-02408	220μF 16V ELECTROLYTIC
0024	876-00556	TUNING ASSEMBLY SHAFT	C118	822-02848	15pF ±5% 50V CERAMIC CAP
0025	861-00423	16MM DIAL CORD PULLEY (2 REQ.)	C201	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0026	825-00082	PULLEY RETAINING PIN (4 REQ.)	C202	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0027	883-01042	LEVER SW MASKING STRIP (6 REQ.)	C203	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0028	883-01045	LEVER SW MASKING STRIP (2 REQ.)	C204	822-02491	15pF ±5% 50V CERAMIC CAP
0029	859-00304	DIAL POINTER GUIDE	C205	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0032	874-00052	VENTILATION SCREEN	C206	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0033	812-01221	CONTROL & SW BRKT (MTS. S1-S10 R905, R907, R918 & R920, CONTROLS)	C207	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0035	819-00248	PLASTIC SUPPORT (4 REQ.)	C208	822-02405	10μF 16V ELECTROLYTIC
0036	812-01222	DIAL LAMP BRKT (MTS. DS501-504)	C209	822-02377	330pF ±10% 50V CERAMIC CAP
0038	812-01226	POWER TRANSFORMER MTG BRACKET	C210	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0039	812-01227	POWER TRANSFORMER BRKT (MTS T501 & REF. NO.38 812-1226 BRKT)	C211	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0042	886-00330	4 LUG TERMINAL STRIP	C212	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0043	886-00331	2 LUG TERMINAL STRIP	C213	822-02404	4.7μF 16V ELECTROLYTIC
0044	812-01208	CAP MTG BRKT (MTS.C501 & C502)	C214	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0045	883-01022	5 LUG TERMINAL STRIP	C215	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0046	812-01224	POWER AMP PCB LEFT MTG. BRACKET	C216	822-02417	1μF 50V ELECTROLYTIC
0047	812-01308	POWER AMP PCB RIGHT MTG. BRKT	C217	822-02410	1000μF 16V ELECTROLYTIC
0048	966-00109	CABINET FOOT (4 REQ.)	C301	822-02497	0.022μF +80-20% 50V CERAMIC CAP
0049	893-01068	CABINET RETAINING WASHER (4 REQ.)	C302	822-02407	100μF 16V ELECTROLYTIC
			C303	822-02405	10μF 16V ELECTROLYTIC
			C304	822-02513	470pF ±5% 50V POLYSTYRENE CAP
			C305	822-02580	0.047μF ±5% 50V MYLAR CAP
			C306	822-02529	1μF 25V ELECTROLYTIC

AUDIO MODEL MC7051 (Cont.)

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
C307	822-02530	0.33μF 25V ELECTROLYTIC	C716	822-02604	33pF ±10% 50V CERAMIC CAP
C308	822-02595	0.22μF -10% 10V ELECTROLYTIC	C717	822-02610	1μF ±20% 50V ELECTROLYTIC
C309	822-02599	5600pF ±5% 50V MYLAR CAP	C718	822-02617	100μF 35V ELECTROLYTIC
C310	822-02599	5600pF ±5% 50V MYLAR CAP	C752	822-02529	1μF 25V ELECTROLYTIC
C311	822-02596	4.7μF ±10% 25V TANT CAP	C753	822-02499	220pF ±10% 50V CERAMIC CAP
C312	822-02596	4.7μF ±10% 25V TANT CAP	C754	822-02620	33μF 25V ELECTROLYTIC
IC101	905-00155	AM IF-DETECTOR INTEGRATED CIRCUIT	C755	822-03160	33μF ±20% 25V ELECTROLYTIC
IC201	905-00143	FM IF INTEGRATED CIRCUIT	C756	822-02601	2700pF ±5% 50V POLYSTYRENE CAP
IC301	905-00135	FM MULTIPLEX DECODER IC	C757	822-02602	8200pF ±5% 50V POLYSTYRENE CAP
LF301	905-00157	R. CHANNEL FM LOW PASS FILTER	C758	822-02604	33pF ±10% 50V CERAMIC CAP
LF302	905-00157	L. CHANNEL FM LOW PASS FILTER	C759	822-02610	1μF ±20% 50V ELECTROLYTIC
L102	820-01149	AM OSCILLATOR COIL	C760	822-02529	1μF 25V ELECTROLYTIC
L201	820-01127	2.2UH CHOKE	C761	822-02499	220pF ±10% 50V CERAMIC CAP
L202	820-01129	18 UH CHOKE	C762	822-02620	33μF 25V ELECTROLYTIC
L203	820-01127	2.2UH CHOKE	C763	822-03160	33μF ±20% 25V ELECTROLYTIC
Q201	921-01060	FM 1ST IF TRANSISTOR NPN	C764	822-02601	2700pF ±5% 50V POLYSTYRENE CAP
Q301	921-01111	FM BUFFER TRANSISTOR NPN	C765	822-02602	8200pF ±5% 50V POLYSTYRENE CAP
Q302	921-01063	FM STEREO LAMP DRIVER TSTR NPN	C766	822-02604	33pF ±10% 50V CERAMIC CAP
Q303	921-01109	R. CHAN FM AUDIO PREAMP TSTR PNP	C767	822-02610	1μF ±20% 50V ELECTROLYTIC
Q304	921-01109	L. CHAN FM AUDIO PREAMP TSTR PNP	C768	822-02617	100μF 35V ELECTROLYTIC
R101	863-02584	330Ω ±5% 1/4W CARBON FILM RES	C769	822-02523	220μF 35V ELECTROLYTIC
R102	863-02479	10KΩ ±5% 1/4W CARBON FILM RES	C770	822-02530	0.33μF 25V ELECTROLYTIC
R103	863-02480	12KΩ ±5% 1/4W CARBON FILM RES	C771	822-02585	3300pF ±5% 50V MYLAR CAP
R104	863-02712	150Ω ±5% 1/4W CARBON FILM RES	C772	822-02604	33pF ±10% 50V CERAMIC CAP
R105	863-02473	2700Ω ±5% 1/4W CARBON FILM RES	C773	822-02401	33μF 10V ELECTROLYTIC
R106	863-02700	10KΩ ADJUSTABLE RES	C774	822-02624	2.2μF ±20% 50V ELECTROLYTIC
R107	863-02472	1500Ω ±5% 1/4W CARBON FILM RES	C775	822-02617	100μF 35V ELECTROLYTIC
R108	863-03036	680Ω ±5% 1/4W CARBON FILM RES	Q701	921-01176	R.CH (PHONO-1) 1st EQUAL'R TSTR NPN
R109	863-02469	1KΩ ±5% 1/4W CARBON FILM RES	Q702	921-01176	R.CHAN 2ND EQUALIZER TSTR PNP
R110	863-02483	27KΩ ±5% 1/4W CARBON FILM RES	Q703	921-01177	R. CHAN 3RD EQUALIZER TSTR NPN
R111	863-02711	47Ω ±5% 1/4W CARBON FILM RES	Q704	921-01176	R.CH (PHONO-2) 1st EQUAL'R TSTR PNP
R201	863-02715	1.8MΩ ±5% 1/4W CARBON FILM RES	Q705	921-01176	R. CHAN 2ND EQUALIZER TSTR PNP
R202	863-02474	3300Ω ±5% 1/4W CARBON FILM RES	Q706	921-01177	R. CHAN 3RD EQUALIZER TSTR NPN
R203	863-02467	560Ω ±5% 1/4W CARBON FILM RES	Q751	921-01176	L.CH (PHONO-1) 1st EQUAL'R TSTR PNP
R204	863-02465	390Ω ±5% 1/4W CARBON FILM RES	Q752	921-01176	L.CHANNEL 2ND EQUALIZER TSTR PNP
R205	863-02584	330Ω ±5% 1/4W CARBON FILM RES	Q753	921-01177	L. CHAN 3RD EQUALIZER TSTR NPN
R206	863-03034	56Ω ±5% 1/4W CARBON FILM RES	Q754	921-01176	L.CH (PHONO-2) 1st EQUAL'R TSTR PNP
R207	863-03034	56Ω ±5% 1/4W CARBON FILM RES	Q755	921-01176	L.CHANNEL 2ND EQUALIZER TSTR PNP
R208	863-02593	560KΩ ±5% 1/4W CARBON FILM RES	Q756	921-01177	L.CHANNEL 3RD EQUALIZER TSTR NPN
R209	863-02584	330Ω ±5% 1/4W CARBON FILM RES	Q757	921-01177	1st MICROPHONE EQUALIZER TSTR NPN
R210	863-02471	2200Ω ±5% 1/4W CARBON FILM RES	Q758	921-01177	2nd MICROPHONE EQUAL'R TSTR NPN
R211	863-02476	5600Ω ±5% 1/4W CARBON FILM RES	R701	863-02463	100Ω ±5% 1/4W CARBON FILM RES
R212	863-02479	10KΩ ±5% 1/4W CARBON FILM RES	R702	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R213	863-03035	560Ω ±5% 1/4W CARBON FILM RES	R703	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
R214	863-02488	100KΩ ±5% 1/4W CARBON FILM RES	R704	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R215	863-03006	100KΩ FM TUNING MTR ADJ CONTROL	R705	863-02588	68KΩ ±5% 1/4W CARBON FILM RES
R216	863-03006	100KΩ FM MUTE ADJUST CONTROL	R706	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
R217	863-02480	12KΩ ±5% 1/4W CARBON FILM RES	R707	863-02585	680Ω ±5% 1/4W CARBON FILM RES
R218	863-02707	22Ω ±5% 1/2W CARBON FILM RES	R708	863-02483	27KΩ ±5% 1/4W CARBON FILM RES
R301	863-03038	39KΩ ±5% 1/4W CARBON FILM RES	R709	863-02593	560KΩ ±5% 14 W CARBON FILM RES
R302	863-03039	120KΩ ±5% 1/4W CARBON FILM RES	R710	863-02476	5600Ω ±5% 1/4W CARBON FILM RES
R303	863-03036	680Ω ±5% 1/4W CARBON FILM RES	R711	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
R304	863-02865	2200Ω ±5% 1/4W CARBON FILM RES	R712	863-02489	120KΩ ±5% 1/4W CARBON FILM RES
R305	863-02501	100Ω ±5% 1/4W CARBON FILM RES	R713	863-02463	100Ω ±5% 1/4W CARBON FILM RES
R306	863-03037	3900Ω ±5% 1/4W CARBON FILM RES	R714	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R307	863-02476	5600Ω ±5% 1/4W CARBON FILM RES	R715	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
R308	863-02701	4700Ω DEMODULATOR ADJ CONTROL	R716	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R309	863-02587	15KΩ ±5% 1/4W CARBON FILM RES	R717	863-02588	68KΩ ±5% 1/4W CARBON FILM RES
R310	863-02488	100KΩ ±5% 1/4W CARBON FILM RES	R718	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
R311	863-02498	3300Ω ±5% 1/4W CARBON FILM RES	R719	863-02585	680Ω ±5% 1/4W CARBON FILM RES
R312	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	R720	863-02483	27KΩ ±5% 1/4W CARBON FILM RES
R313	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	R721	863-02593	560KΩ ±5% 1/4W CARBON FILM RES
R316	863-02472	1500Ω ±5% 1/4W CARBON FILM RES	R722	863-02476	5600Ω ±5% 1/4W CARBON FILM RES
R317	863-02472	1500Ω ±5% 1/4W CARBON FILM RES	R723	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
R318	863-03006	100KΩ STEREO SEPARATION ADJUST	R724	863-02489	120KΩ ±5% 1/4W CARBON FILM RES
R319	863-02474	3300Ω ±5% 1/4W CARBON FILM RES	R725	863-03034	56Ω ±5% 1/4W CARBON FILM RES
R320	863-02474	3300Ω ±5% 1/4W CARBON FILM RES	R751	863-02463	100Ω ±5% 1/4W CARBON FILM RES
R321	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	R752	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R322	863-02475	4700Ω ±5% 1/4W CARBON FILM RES	R753	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
R323	863-02686	100KΩ ±5% 1/4W CARBON FILM RES	R754	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
R324	863-02785	470Ω ±5% 1/4W CARBON FILM RES	R755	863-02588	68KΩ ±5% 1/4W CARBON FILM RES
T101	895-01069	AM IF TRANSFORMER	R756	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
T102	895-01068	AM IF TRANSFORMER	R757	863-02585	680Ω ±5% 1/4W CARBON FILM RES
T201	895-01067	FM IF TRANSFORMER	R758	863-02483	27KΩ ±5% 1/4W CARBON FILM RES
T301	895-01070	FM MULTIPLEX OSC TRANSFORMER	R759	863-02593	560KΩ ±5% 1/4W CARBON FILM RES
T302	895-01071	FM MULTIPLEX OSC TRANSFORMER	R760	863-02476	5600Ω ±5% 1/4W CARBON FILM RES
Y201	905-00158	10.7 MHZ CERAMIC FILTER	R761	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
Y202	905-00158	10.7 MHZ CERAMIC FILTER	R762	863-02489	120KΩ ±5% 1/4W CARBON FILM RES
Y203	905-00158	10.7 MHZ CERAMIC FILTER	R763	863-02463	100Ω ±5% 1/4W CARBON FILM RES
O092	804-00615	TUNER PRINTED CIRCUIT BOARD	R764	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
PHONO EQUALIZER CIRCUIT BOARD COMPONENTS			R765	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
C702	822-02529	1μF 25V ELECTROLYTIC	R766	863-02488	100KΩ ±5% 1/4W CARBON FILM RES
C703	822-02499	220pF ±10% 50V CERAMIC CAP	R767	863-02588	68KΩ ±5% 1/4W CARBON FILM RES
C704	822-02620	33μF 25V ELECTROLYTIC	R768	863-02486	56KΩ ±5% 1/4W CARBON FILM RES
C705	822-03160	33μF ±20% 25V ELECTROLYTIC	R769	863-02585	680Ω ±5% 1/4W CARBON FILM RES
C706	822-02601	2700pF ±5% 50V POLYSTYRENE CAP	R770	863-02483	27KΩ ±5% 1/4W CARBON FILM RES
C707	822-02602	8200pF ±5% 50V POLYSTYRENE CAP	R771	863-02593	560KΩ ±5% 1/4W CARBON FILM RES
C708	822-02604	33pF ±10% 50V CERAMIC CAP	R772	863-02476	5600Ω ±5% 1/4W CARBON FILM RES
C709	822-02610	1μF ±20% 50V ELECTROLYTIC	R773	863-02471	2200Ω ±5% 1/4W CARBON FILM RES
C710	822-02529	1μF 25V ELECTROLYTIC	R774	863-02489	120KΩ ±5% 1/4W CARBON FILM RES
C711	822-02499	220pF ±10% 50V CERAMIC CAP	R775	863-03034	56Ω ±5% 1/4W CARBON FILM RES
C712	822-02620	33μF 25V ELECTROLYTIC	R776	863-03034	56Ω ±5% 1/4W CARBON FILM RES
C713	822-03160	33μF ±20% 25V ELECTROLYTIC	R777	863-02463	100Ω ±5% 1/4W CARBON FILM RES
C714	822-02601	2700pF ±5% 50V POLYSTYRENE CAP	R778	863-02485	47KΩ ±5% 1/4W CARBON FILM RES
C715	822-02602	8200pF ±5% 50V POLYSTYRENE CAP	R779	863-02590	270KΩ ±5% 1/4W CARBON FILM RES
			R780	863-02489	120KΩ ±5% 1/4W CARBON FILM RES

AUDIO MODEL MC7051 (Cont.)

REF NO	PART NO	DESCRIPTION
R781	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R782	863-02588	68K Ω \pm 5% 1/4W CARBON FILM RES
R783	863-02589	390K Ω \pm 10% 1/4W CARBON FILM RES
R784	863-02481	18K Ω \pm 5% 1/4W CARBON FILM RES
R785	863-02473	2700 Ω \pm 5% 1/4W CARBON FILM RES
R786	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R787	863-02463	100 Ω \pm 5% 1/4W CARBON FILM RES

PRE-AMPLIFIER CIRCUIT BOARD COMPONENTS

C901	822-03146	470pF \pm 10% 50V CERAMIC CAP
C902	822-02935	0.12 μ F \pm 5% 50V MYLAR CAP
C903	822-02624	2.2 μ F \pm 20% 50V ELECTROLYTIC
C904	822-02377	330pF \pm 10% 50V CERAMIC CAP
C905	822-02405	10 μ F 16V ELECTROLYTIC
C906	822-02621	33 μ F \pm 20% 35V ELECTROLYTIC
C907	822-02622	4.7 μ F \pm 20% 35V ELECTROLYTIC
C908	822-02600	0.033 μ F \pm 5% 50V MYLAR CAP
C909	822-02600	0.033 μ F \pm 5% 50V MYLAR CAP
C910	822-02500	0.001 μ F \pm 5% 50V MYLAR CAP
C911	822-02622	4.7 μ F \pm 20% 35V ELECTROLYTIC
C912	822-02622	4.7 μ F \pm 20% 35V ELECTROLYTIC
C913	822-02623	100 μ F \pm 20% 10V ELECTROLYTIC
C914	822-02597	2.2 μ F \pm 10% 25V TANT CAP
C915	822-02577	0.012 μ F \pm 5% 50V MYLAR CAP
C916	822-02600	0.033 μ F \pm 5% 50V MYLAR CAP
C919	822-02823	100pF \pm 10% 50V CERAMIC CAP
C920	822-02604	33pF \pm 10% 50V CERAMIC CAP
C951	822-03146	470pF \pm 10% 50V CERAMIC CAP
C952	822-02935	0.12 μ F \pm 5% 50V MYLAR CAP
C953	822-02624	2.2 μ F \pm 20% 50V ELECTROLYTIC
C954	822-02377	330pF \pm 10% 50V CERAMIC CAP
C955	822-02405	10 μ F 16V ELECTROLYTIC
C956	822-02621	33 μ F \pm 20% 35V ELECTROLYTIC
C957	822-02622	4.7 μ F \pm 20% 35V ELECTROLYTIC
C958	822-02600	0.033 μ F \pm 5% 50V MYLAR CAP
C959	822-02600	0.033 μ F \pm 5% 50V MYLAR CAP
C960	822-02500	0.001 μ F \pm 5% 50V MYLAR CAP
C961	822-02622	4.7 μ F \pm 20% 35V ELECTROLYTIC
C962	822-02622	4.7 μ F \pm 20% 35V ELECTROLYTIC
C963	822-02623	100 μ F \pm 20% 10V ELECTROLYTIC
C964	822-02597	2.2 μ F \pm 10% 25V TANT CAP
C965	822-02577	0.012 μ F \pm 5% 50V MYLAR CAP
C966	822-02600	0.033 μ F \pm 5% 50V MYLAR CAP
C967	822-02617	100 μ F 35V ELECTROLYTIC
C968	822-02523	220 μ F 35V ELECTROLYTIC
C969	822-02823	100pF \pm 10% 50V CERAMIC CAP
C970	822-02604	33pF \pm 10% 50V CERAMIC CAP
Q901	921-01177	R.CH TONE CONTROL AMP TSTR NPN
Q902	921-01176	R. CHANNEL 1ST PREAMP TSTR NPN
Q903	921-01177	R.CHANNEL 2ND PREAMP TSTR NPN
Q951	921-01177	L.CH TONE CONTROL AMP TSTR NPN
Q952	921-01176	L.CHANNEL 1ST PREAMP TSTR NPN
Q953	921-01177	L.CHANNEL 2ND PREAMP TSTR NPN
R902	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R903	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R904	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
R905	863-03029	250K Ω DUAL ROTARY BAL CONTROL
R906	863-02475	4700 Ω \pm 5% 1/4W CARBON FILM RES
R907	863-03321	100K Ω (50K Ω) DUAL TAPPED VOL CONT
R908	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R909	863-02492	150K Ω \pm 5% 1/4W CARBON FILM RES
R910	863-02488	100K Ω \pm 5% 1/4W CARBON FILM RES
R911	863-02481	18K Ω \pm 5% 1/4W CARBON FILM RES
R912	863-02481	18K Ω \pm 5% 1/4W CARBON FILM RES
R913	863-02472	1500 Ω \pm 5% 1/4W CARBON FILM RES
R914	863-02479	10K Ω \pm 5% 1/4W CARBON FILM RES
R915	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R917	863-02476	5600 Ω \pm 5% 1/4W CARBON FILM RES
R918	863-03027	100K Ω DUAL ROTARY BASS CONTROL
R919	863-02483	27K Ω \pm 5% 1/4W CARBON FILM RES
R920	863-03027	100K Ω DUAL ROTARY TREB CONTROL
R922	863-02476	5600 Ω \pm 5% 1/4W CARBON FILM RES
R923	863-02592	470K Ω \pm 5% 1/4W CARBON FILM RES
R924	863-02489	120K Ω \pm 5% 1/4W CARBON FILM RES
R925	863-02713	6800 Ω \pm 5% 1/4W CARBON FILM RES
R926	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES
R927	863-02486	56K Ω \pm 5% 1/4W CARBON FILM RES
R929	863-02592	470K Ω \pm 5% 1/4W CARBON FILM RES
R930	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R934	863-02481	18K Ω \pm 5% 1/4W CARBON FILM RES
R952	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R956	863-02475	4700 Ω \pm 5% 1/4W CARBON FILM RES
R958	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R959	863-02492	150K Ω \pm 5% 1/4W CARBON FILM RES
R960	863-02488	100K Ω \pm 5% 1/4W CARBON FILM RES
R961	863-02481	18K Ω \pm 5% 1/4W CARBON FILM RES
R962	863-02481	18K Ω \pm 5% 1/4W CARBON FILM RES
R963	863-02472	1500 Ω \pm 5% 1/4W CARBON FILM RES
R964	863-02479	10K Ω \pm 5% 1/4W CARBON FILM RES
R965	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R967	863-02476	5600 Ω \pm 5% 1/4W CARBON FILM RES
R969	863-02483	27K Ω \pm 5% 1/4W CARBON FILM RES
R972	863-02476	5600 Ω \pm 5% 1/4W CARBON FILM RES
R973	863-02592	470K Ω \pm 5% 1/4W CARBON FILM RES
R974	863-02489	120K Ω \pm 5% 1/4W CARBON FILM RES
R975	863-02713	6800 Ω \pm 5% 1/4W CARBON FILM RES

REF NO	PART NO	DESCRIPTION
R976	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES
R977	863-02486	56K Ω \pm 5% 1/4W CARBON FILM RES
R979	863-02592	470K Ω \pm 5% 1/4W CARBON FILM RES
R980	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R981	863-02584	330 Ω \pm 5% 1/4W CARBON FILM RES
R982	863-02464	220 Ω \pm 5% 1/4W CARBON FILM RES
R984	863-02481	18K Ω \pm 5% 1/4W CARBON FILM RES
S001	885-00612	ROTARY FUNCTION SWITCH)
S002	885-00585	TAPE DUBBING LEVER SWITCH
S003	885-00585	TAPE MONITOR LEVER SWITCH
S004	885-00583	MODE (STEREO-MONO) LEVER SWITCH
S005	885-00583	LOUDNESS (ON-OFF) LEVER SWITCH
S006	885-00583	FM MUTE (ON-OFF) LEVER SWITCH
S007	885-00583	HI-FILTER (ON-OFF) LEVER SWITCH
S008	885-00583	LO-FILTER (ON-OFF) LEVER SWITCH
0098	NON STOCK	PRE-AMPLIFIER CIRCUIT BOARD

POWER AMPLIFIER CIRCUIT BOARD COMPONENTS

CR1401	903-00384	R. CHANNEL BIAS DIODE
CR1402	903-00464	R. CHAN TEMP COMPENSATING DIODE
CR1403	903-00384	R. CHANNEL BIAS DIODE
CR1451	903-00384	L. CHANNEL BIAS DIODE
CR1452	903-00464	L. CHAN TEMP COMPENSATING DIODE
CR1453	903-00384	L. CHANNEL BIAS DIODE
C1401	822-02530	0.33 μ F 25V ELECTROLYTIC
C1402	822-02377	330pF \pm 10% 50V CERAMIC CAP
C1403	822-02407	100 μ F 16V ELECTROLYTIC
C1404	822-02847	68pF \pm 10% 50V CERAMIC CAP
C1405	822-02847	68pF \pm 10% 50V CERAMIC CAP
C1406	822-02509	0.1 μ F \pm 5% 50V MYLAR CAP
C1407	822-02849	47 μ F 50V ELECTROLYTIC
C1408	822-02371	47pF \pm 10% 50V CERAMIC CAP
C1409	822-02371	47pF \pm 10% 50V CERAMIC CAP
C1410	822-02849	47 μ F 50V ELECTROLYTIC
C1411	822-02509	0.1 μ F \pm 5% 50V MYLAR CAP
C1451	822-02530	0.33 μ F 25V ELECTROLYTIC
C1452	822-02377	330pF \pm 10% 50V CERAMIC CAP
C1453	822-02407	100 μ F 16V ELECTROLYTIC
C1454	822-02847	68pF \pm 10% 50V CERAMIC CAP
C1455	822-02847	68pF \pm 10% 50V CERAMIC CAP
C1456	822-02509	0.1 μ F \pm 5% 50V MYLAR CAP
C1457	822-02849	47 μ F 50V ELECTROLYTIC
C1458	822-02371	47pF \pm 10% 50V CERAMIC CAP
C1459	822-02371	47pF \pm 10% 50V CERAMIC CAP
C1460	822-02849	47 μ F 50V ELECTROLYTIC
C1461	822-02509	0.1 μ F \pm 5% 50V MYLAR CAP
L1401	820-01150	CHOKE COIL 2.2 μ H 10%
L1451	820-01150	CHOKE COLL 2.2 μ H 10%
Q1401	921-01102	R. CHANNEL BIAS TRANSISTOR PNP
Q1402	921-01102	R. CHANNEL BIAS TRANSISTOR PNP
Q1403	921-01103	R. CH 1ST AUDIO AMP TSTR NPN
Q1404	921-01103	R. CHAN 2ND AUDIO AMP TSTR NPN
Q1405	921-01178	R. CHANNEL PREDRIVER TSTR PNP
Q1406	921-01105	R. CHANNEL BIAS TRANSISTOR NPN
Q1407	921-01179	R. CHANNEL BIAS TRANSISTOR NPN
Q1408	921-01114	R. CHANNEL DRIVER TRANSISTOR NPN
Q1409	921-01115	R. CHANNEL DRIVER TRANSISTOR PNP
Q1451	921-01102	L. CHANNEL BIAS TRANSISTOR PNP
Q1452	921-01102	L. CHANNEL 1ST AUDIO AMP TSTR NPN
Q1454	921-01103	L. CHANNEL 2ND AUDIO AMP TSTR NPN
Q1455	921-01178	L. CHANNEL PREDRIVER TSTR PNP
Q1456	921-01105	L. CHANNEL BIAS TRANSISTOR NPN
Q1457	921-01179	L. CHANNEL BIAS TRANSISTOR NPN
Q1458	921-01114	L. CHANNEL DRIVER TRANSISTOR NPN
Q1459	921-01115	L. CHANNEL DRIVER TRANSISTOR PNP
R1401	863-02593	560K Ω \pm 5% 1/4W CARBON FILM RES
R1402	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R1403	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R1404	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R1405	863-02464	220 Ω \pm 5% 1/4W CARBON FILM RES
R1406	863-02464	220 Ω \pm 5% 1/4W CARBON FILM RES
R1407	863-02483	27K Ω \pm 5% 1/4W CARBON FILM RES
R1408	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES
R1409	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R1410	863-02714	39K Ω \pm 5% 1/4W CARBON FILM RES
R1411	863-02701	4700 Ω R. CHANNEL BIAS ADJUST CONT
R1412	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES
R1413	863-02581	68 Ω \pm 5% 1/4W CARBON FILM RES
R1414	863-02581	68 Ω \pm 5% 1/4W CARBON FILM RES
R1415	863-02581	68 Ω \pm 5% 1/4W CARBON FILM RES
R1416	863-03032	220 Ω \pm 10% 1W METAL FILM RES
R1417	863-03032	220 Ω \pm 10% 1W METAL FILM RES
R1418	863-03032	220 Ω \pm 10% 1W METAL FILM RES
R1419	863-03032	220 Ω \pm 10% 1W METAL FILM RES
R1420	863-02703	0.47 Ω \pm 10% 3W WIREWOUND RES
R1421	863-02703	0.47 Ω \pm 10% 3W WIREWOUND RES
R1422	863-03033	10 Ω \pm 10% 1W METAL FILM RES
R1423	863-02705	10 Ω \pm 5% 1/2W CARBON FILM RES
R1451	863-02593	560K Ω \pm 5% 1/4W CARBON FILM RES
R1452	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R1453	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES
R1454	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES
R1455	863-02464	220 Ω \pm 5% 1/4W CARBON FILM RES
R1456	863-02464	220 Ω \pm 5% 1/4W CARBON FILM RES
R1457	863-02483	27K Ω \pm 5% 1/4W CARBON FILM RES
R1458	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES

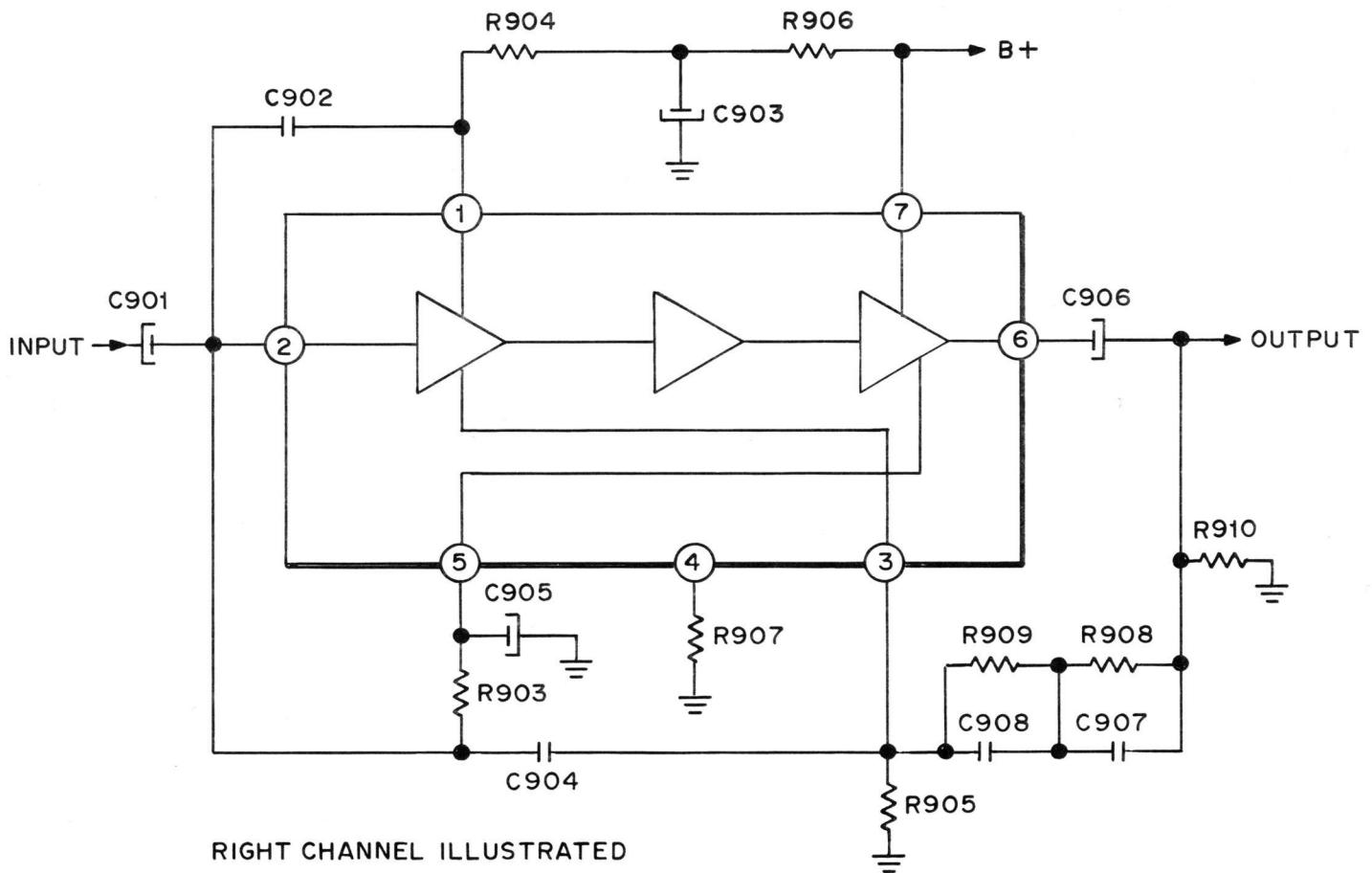
AUDIO MODEL MC7051 (Cont.)

REF NO	PART NO	DESCRIPTION	REF NO	PART NO	DESCRIPTION
R1459	863-02485	47K Ω \pm 5% 1/4W CARBON FILM RES	CR701	903-00384	RECTIFIER DIODE
R1460	863-02714	39K Ω \pm 5% 1/4W CARBON FILM RES	CR702	903-00384	RECTIFIER DIODE
R1461	863-02701	4700 Ω ROTARY L. CHAN BIAS CONTROL	CR703	903-00384	RECTIFIER DIODE
R1462	863-02471	2200 Ω \pm 5% 1/4W CARBON FILM RES	CR704	903-00384	RECTIFIER DIODE
R1463	863-02581	68 Ω \pm 5% 1/4W CARBON FILM RES	CR705	903-00384	RECTIFIER DIODE
R1464	863-02581	68 Ω \pm 5% 1/4W CARBON FILM RES	CR706	903-00384	RECTIFIER DIODE
R1465	863-02581	68 Ω \pm 5% 1/4W CARBON FILM RES	CR707	903-00347	RECTIFIER DIODE
R1466	863-03032	220 Ω \pm 10% 1W METAL FILM RES	C723	822-02595	0.22 μ F -10% 10V ELECTROLYTIC
R1467	863-03032	220 Ω \pm 10% 1W METAL FILM RES	C724	822-02595	0.22 μ F -10% 10V ELECTROLYTIC
R1468	863-03032	220 Ω \pm 10% 1W METAL FILM RES	C725	822-02608	470 μ F 6.3V ELECTROLYTIC
R1469	863-03032	220 Ω \pm 10% 1W METAL FILM RES	C726	822-02608	470 μ F 6.3V ELECTROLYTIC
R1470	863-02703	0.47 Ω \pm 10% 3W WIREWOUND RES	C727	822-02406	47 μ F 16V ELECTROLYTIC
R1471	863-02703	0.47 Ω \pm 10% 3W WIREWOUND RES	Q707	921-01063	RELAY L. CHANNEL INPUT TSTR NPN
R1472	863-03033	10 Ω \pm 10% 1W METAL FILM RES	921-01063	RELAY R. CHANNEL INPUT TRANSISTOR NPN	
R1473	863-02705	10 Ω \pm 5% 1/2W CARBON FILM RES	Q709	921-01063	+ DC VOLTAGE DETECTOR TSTR NPN
0095	NON STOCK	POWER AMPLIFIER P C BD	Q710	921-01063	- DC VOLTAGE DETECTOR TSTR NPN
POWER SUPPLY CIRCUIT BOARD COMPONENTS			Q711	921-01109	DC SWITCH TRANSISTOR NPN
CRX501	903-00381	RECTIFIER DIODE	Q712	921-01082	DC DRIVER TRANSISTOR NPN
CRX502	903-00381	RECTIFIER DIODE	Q713	921-01105	RELAY COIL DRIVER TRANSISTOR NPN
CRX503	903-00381	RECTIFIER DIODE	R731	863-02473	2700 Ω \pm 5% 1/4W CARBON FILM RES
CRX504	903-00381	RECTIFIER DIODE	R732	863-02473	2700 Ω \pm 5% 1/4W CARBON FILM RES
CRX505	903-00382	RECTIFIER DIODE	R733	863-02473	2700 Ω \pm 5% 1/4W CARBON FILM RES
CRX506	903-00382	RECTIFIER DIODE	R734	863-02473	2700 Ω \pm 5% 1/4W CARBON FILM RES
CRX509	903-00347	RECTIFIER DIODE	R735	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
CRX510	903-00347	RECTIFIER DIODE	R736	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
CR501	903-00381	RECTIFIER	R737	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
CR502	903-00381	RECTIFIER	R738	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
CR503	903-00381	RECTIFIER	R739	863-02478	8200 Ω \pm 5% 1/4W CARBON FILM RES
CR504	903-00381	RECTIFIER	R740	863-02482	22K Ω \pm 5% 1/4W CARBON FILM RES
CR505	903-00382	RECTIFIER	R741	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
CR506	903-00382	RECTIFIER	R742	863-02492	150K Ω \pm 5% 1/4W CARBON FILM RES
CR507	903-00383	14 VOLT, 1 WATT ZENER DIODE	R743	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
CR508	903-00364	12 VOLT, 1 WATT ZENER DIODE	R744	863-02588	68K Ω \pm 5% 1/4W CARBON FILM RES
CR509	903-00347	RECTIFIER DIODE	R745	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
CR510	903-00347	RECTIFIER DIODE	R746	863-02479	10K Ω \pm 5% 1/4W CARBON FILM RES
C503	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP	R747	863-02479	10K Ω \pm 5% 1/4W CARBON FILM RES
C504	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP	R748	863-02591	82K Ω \pm 5% 1/4W CARBON FILM RES
C505	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP	R749	863-02582	22 Ω \pm 5% 1/4W CARBON FILM RES
C506	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP	R750	863-02709	270 Ω \pm 5% 1/2W CARBON FILM RES
C507	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP	R916	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
C508	822-02498	0.01 μ F \pm 20% 500V CERAMIC CAP	R921	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
C509	822-02408	220 μ F 16V ELECTROLYTIC	R928	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
C510	822-02614	330 μ F 50V ELECTROLYTIC	R953	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
C511	822-02613	470 μ F 50V ELECTROLYTIC	R954	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
C512	822-02613	470 μ F 50V ELECTROLYTIC	R966	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
C513	822-02619	220 μ F 50V ELECTROLYTIC	R971	863-02587	15K Ω \pm 5% 1/4W CARBON FILM RES
C514	822-02616	3.3 μ F 50V ELECTROLYTIC	R978	863-02474	3300 Ω \pm 5% 1/4W CARBON FILM RES
C515	822-02616	3.3 μ F 50V ELECTROLYTIC	0093	804-00621	RELAY PRINTED CIRCUIT BOARD
C516	822-02409	470 μ F 16V ELECTROLYTIC	804-622 LED PRINTED CIRCUIT BOARD ASSEMBLY COMPONENTS		
FX502S	936-00069	6 AMP PIGTAIL FUSE	CR511	903-00386	RED LED FUNCTION INDICATOR (MIC)
FX503	936-00071	0.5 AMP SLO-BLO PIGTAIL FUSE	CR512	903-00386	RED FUNCTION INDICATOR LED (AUX)
FX504	936-00071	0.5 AMP SLO-BLO PIGTAIL FUSE	CR513	903-00386	RED FUNCTION INDICATOR LED (PHONO)
FX505	936-00068	2 AMP PIGTAIL FUSE	CR514	903-00386	RED FUNCTION INDICATOR LED (TAPE)
F503	936-00071	PIGTAIL FUSE, 0.5A SB	CR515	903-00386	RED FUNCTION INDICATOR LED (FM)
F504	936-00071	PIGTAIL FUSE, 0.5A SB	CR516	903-00386	RED FUNCTION INDICATOR LED (AM)
F505	936-00068	PIGTAIL FUSE, 2A	CR517	903-00385	GREEN STEREO INDICATOR LED
Q501	921-01065	VOLTAGE REGULATOR TSTR NPN	R513	863-02584	330 Ω \pm 5% 1/4W CARBON FILM RES
Q502	921-01065	VOLTAGE REGULATOR TSTR NPN	R514	863-02585	680 Ω \pm 5% 1/4W CARBON FILM RES
Q503	921-01063	VOLTAGE REGULATOR TSTR NPN	R515	863-02584	330 Ω \pm 5% 1/4W CARBON FILM RES
R501	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES	0099	NON STOCK	LED PRINTED CIRCUIT BOARD
R502	863-02710	10 Ω \pm 5% 1/4W CARBON FILM RES	804-736 DE-EMPHASIS CIRCUIT BOARD ASSEMBLY		
R503	863-02713	6800 Ω \pm 5% 1/4W CARBON FILM RES	C313	822-02506	0.01 μ \pm 5% 50V MYLAR CAP
R504	863-03031	180 Ω \pm 10% 5W WIREWOUND RES	C314	822-02506	0.01 μ \pm 5% 50V MYLAR CAP
R505	863-02706	15 Ω \pm 5% 1/2W CARBON FILM RES	S009	885-00578	DE-EMPHASIS (25US-75US) SLIDE SWI
R506	863-02713	6800 Ω \pm 5% 1/4W CARBON FILM RES	0100	NON STOCK	DE-EMPHASIS PRINTED CIRCUIT BD
R507	863-02469	1K Ω \pm 5% 1/4W CARBON FILM RES	PARTS NOT REFERENCED ON EXPLODED VIEW		
R508	863-02479	10K Ω \pm 5% 1/4W CARBON FILM RES	20204405 INSTRUCTION BOOK		
R509	863-02700	10K Ω ROTARY VOLT'GE REG CONTROL			
R510	863-02586	3900 Ω \pm 5% 1/4W CARBON FILM RES			
R511	863-02479	10K Ω \pm 5% 1/4W CARBON FILM RES			
0094	NON STOCK	POWER SUPPLY PRINTED CIRCUIT BD			

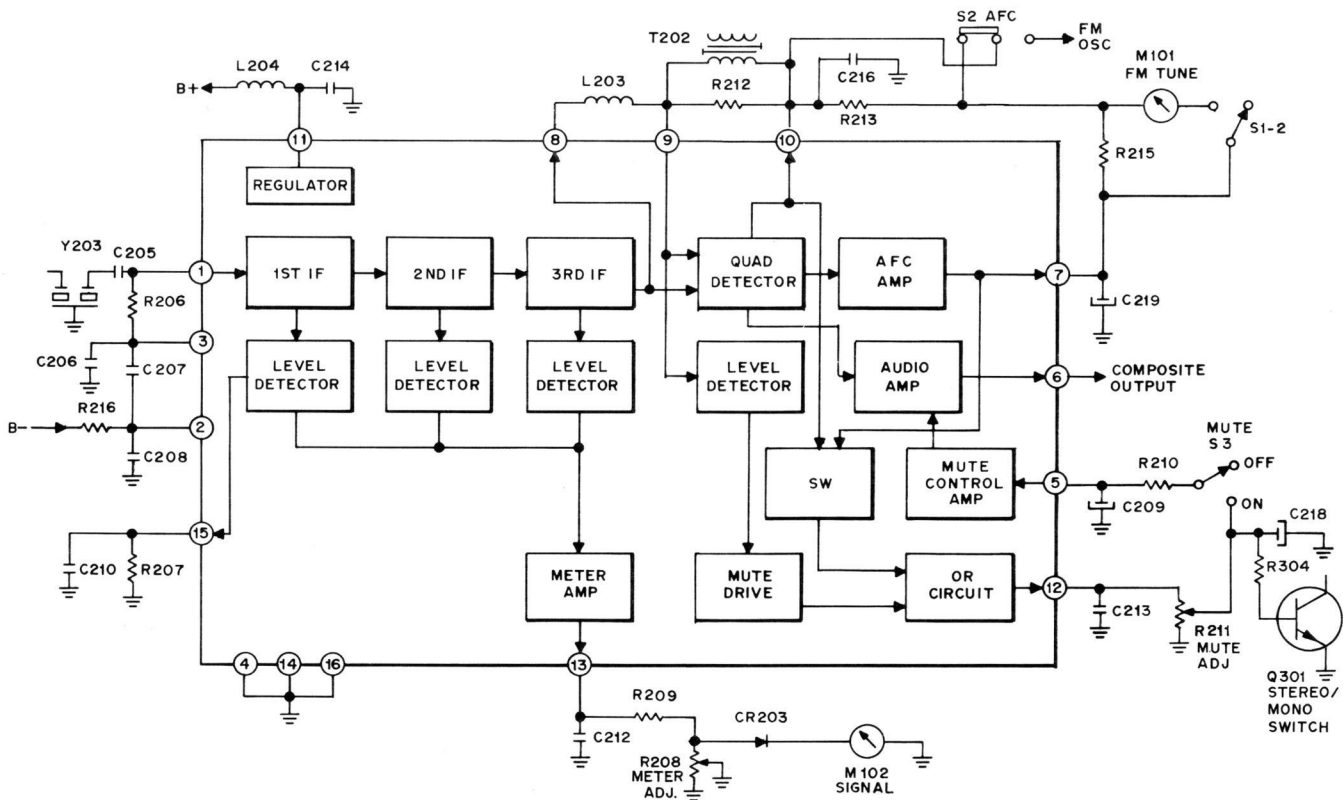
975-105 TUNER

REF NO.	PART NO.	DESCRIPTION	REF NO.	PART NO.	DESCRIPTION
FM TUNER COMPONENTS					
C002	822-2837	100pF 5% 50V CERAMIC CAP	L003	895-1096	RF COIL PRIMARY
C003	822-2835	3pF 5% 50V CERAMIC CAP	L004	895-1097	RF COIL SECONDARY
C004	822-2844	0.022MFD +80—20% 50V CERAMIC CAP	L006	820-1178	COIL
C005	822-2844	0.022MFD +80—20% 50V CERAMIC CAP	L007	895-1098	OSCILLATOR TRANSFORMER
C006	822-2839	12pF 5% 50V CERAMIC CAP	Q001	921-1159	RF AMPLIFIER TRANSISTOR FET
C007	822-2839	12pF 5% 50V CERAMIC CAP	Q002	921-1160	MIXER TRANSISTOR NPN
C008	822-2834	1pF 5% 50V CERAMIC CAP	Q003	921-1161	OSCILLATOR TRANSISTOR NPN
C009	822-2836	18pF 5% 50V CERAMIC CAP	R001	863-3023	100K OHM 5% 1/4W CARBON FILM RES
C011	822-2844	0.022MFD +80—20% 50V CERAMIC CAP	R002	863-3023	100K OHM 5% 1/4W CARBON FILM RES
C012	822-2844	0.022MFD +80—20% 50V CERAMIC CAP	R003	863-3024	1M OHM 5% 1/4W CARBON FILM RES
C013	822-2844	0.022MFD +80—20% 50V CERAMIC CAP	R004	863-3014	47 OHM 5% 1/4W CARBON FILM RES
C014	822-2841	47pF 10% 50V CERAMIC CAP	R005	863-3015	68 OHM 5% 1/4W CARBON FILM RES
C015	822-2840	15pF 5% 50V CERAMIC CAP	R006	863-3021	100 OHM 5% 1/4W CARBON FILM RES
C016	822-2843	6pF 5% 50V CERAMIC CAP	R007	863-3018	4700 OHM 5% 1/4W CARBON FILM RES
C017	822-2842	15pF 5% 50V CERAMIC CAP	R008	863-3020	22K OHM 5% 1/4W CARBON FILM RES
C018	822-2840	15pF 5% 50V CERAMIC CAP	R009	863-3016	1K OHM 5% 1/4W CARBON FILM RES
C021	822-2838	10pF 5% 50V CERAMIC CAP	R010	863-3022	100 OHM 5% 1/4W CARBON FILM RES
C022	822-2844	0.022MFD +80—20% 50V CERAMIC CAP	R011	863-3018	4700 OHM 5% 1/4W CARBON FILM RES
L001	820-1176	TRAP COIL	R012	863-3017	1500 OHM 5% 1/4W CARBON FILM RES
L002	820-1177	ANTENNA COIL	R013	863-3019	10K OHM 5% 1/4W CARBON FILM RES
			R014	863-3019	10K OHM 5% 1/4W CARBON FILM RES
			T001	895-1095	IF TRANSFORMER

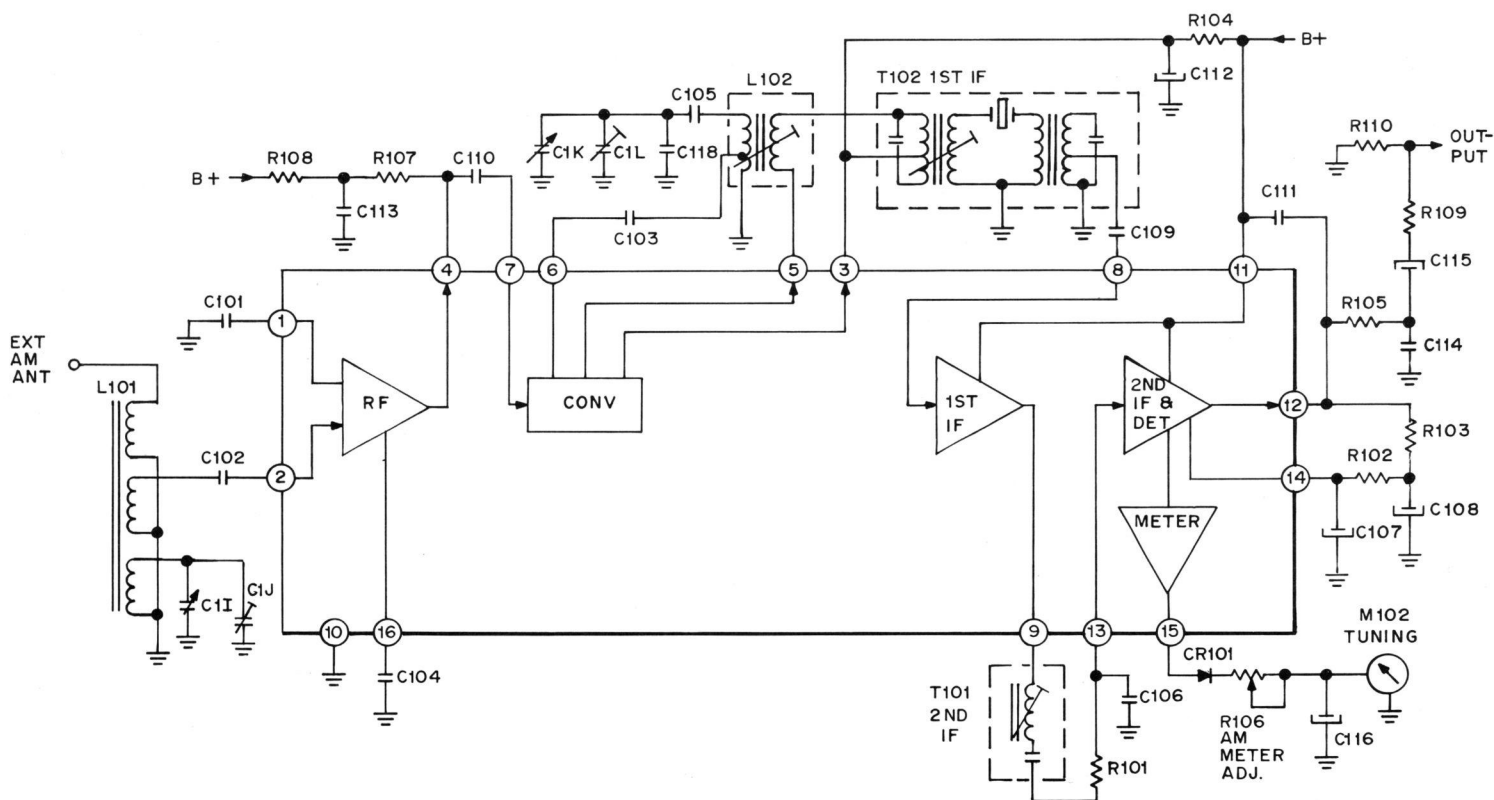
NOTES



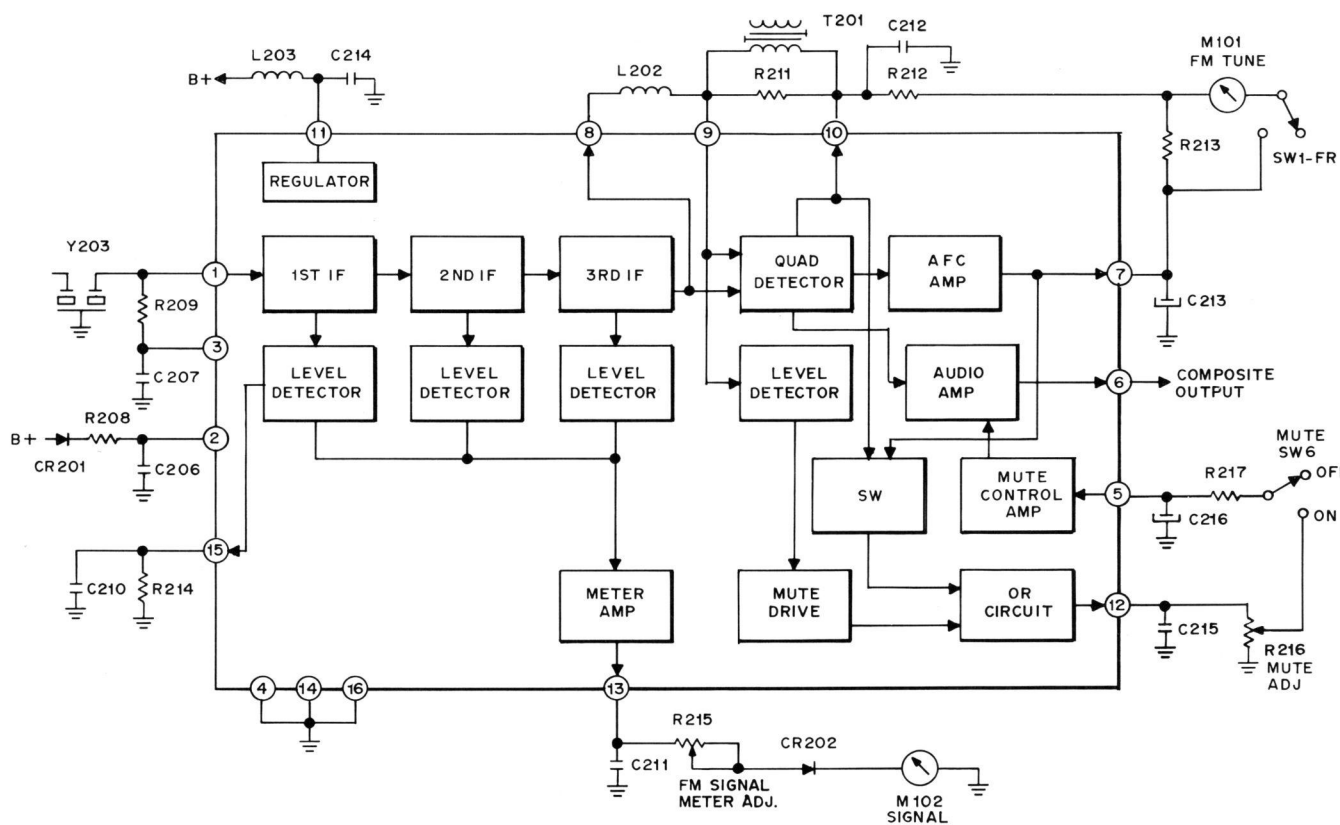
MODELS MC7031, MC7041 – IC901, IC951 BLOCK DIAGRAM



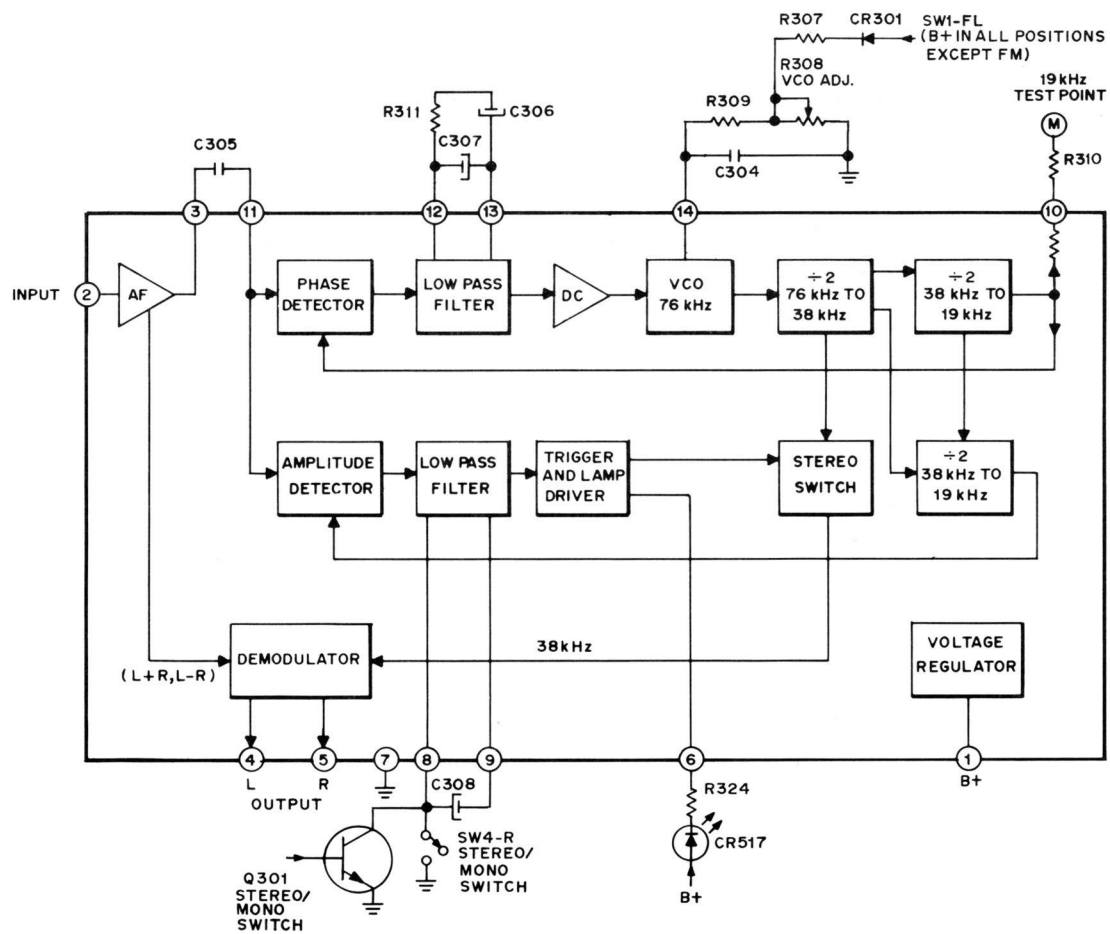
MODELS MC7031, MC7041 – IC201 BLOCK DIAGRAM



MODEL MC7051 - IC101 BLOCK DIAGRAM

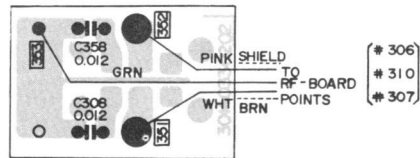


MODEL MC7051 - IC201 BLOCK DIAGRAM

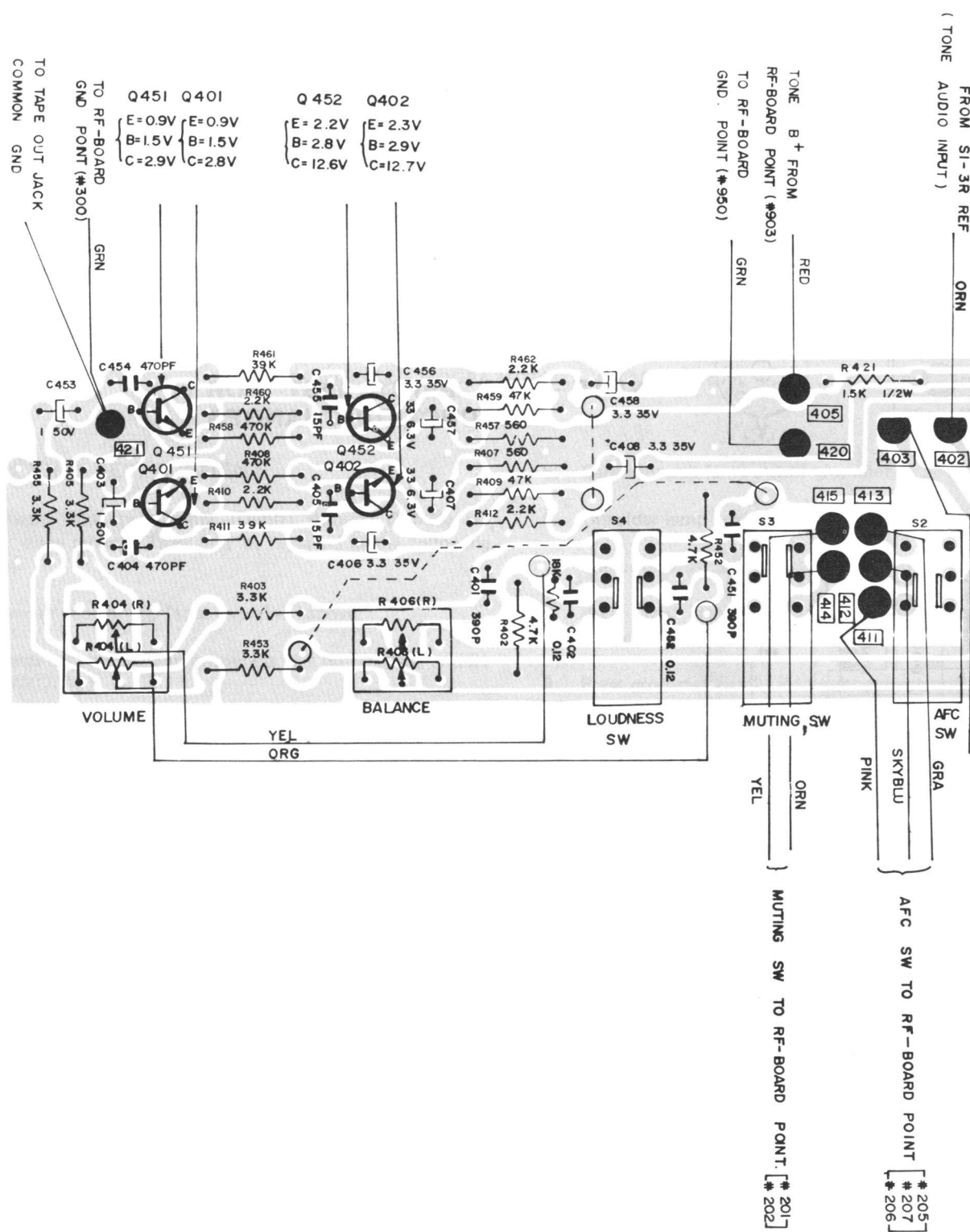


MODEL MC7051 – IC301 BLOCK DIAGRAM

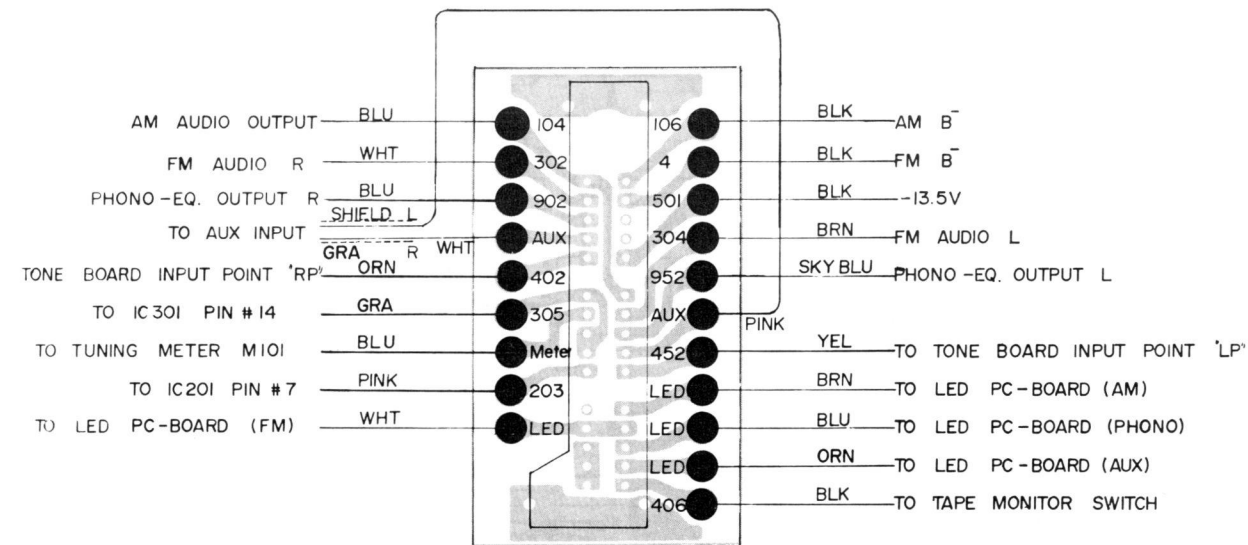
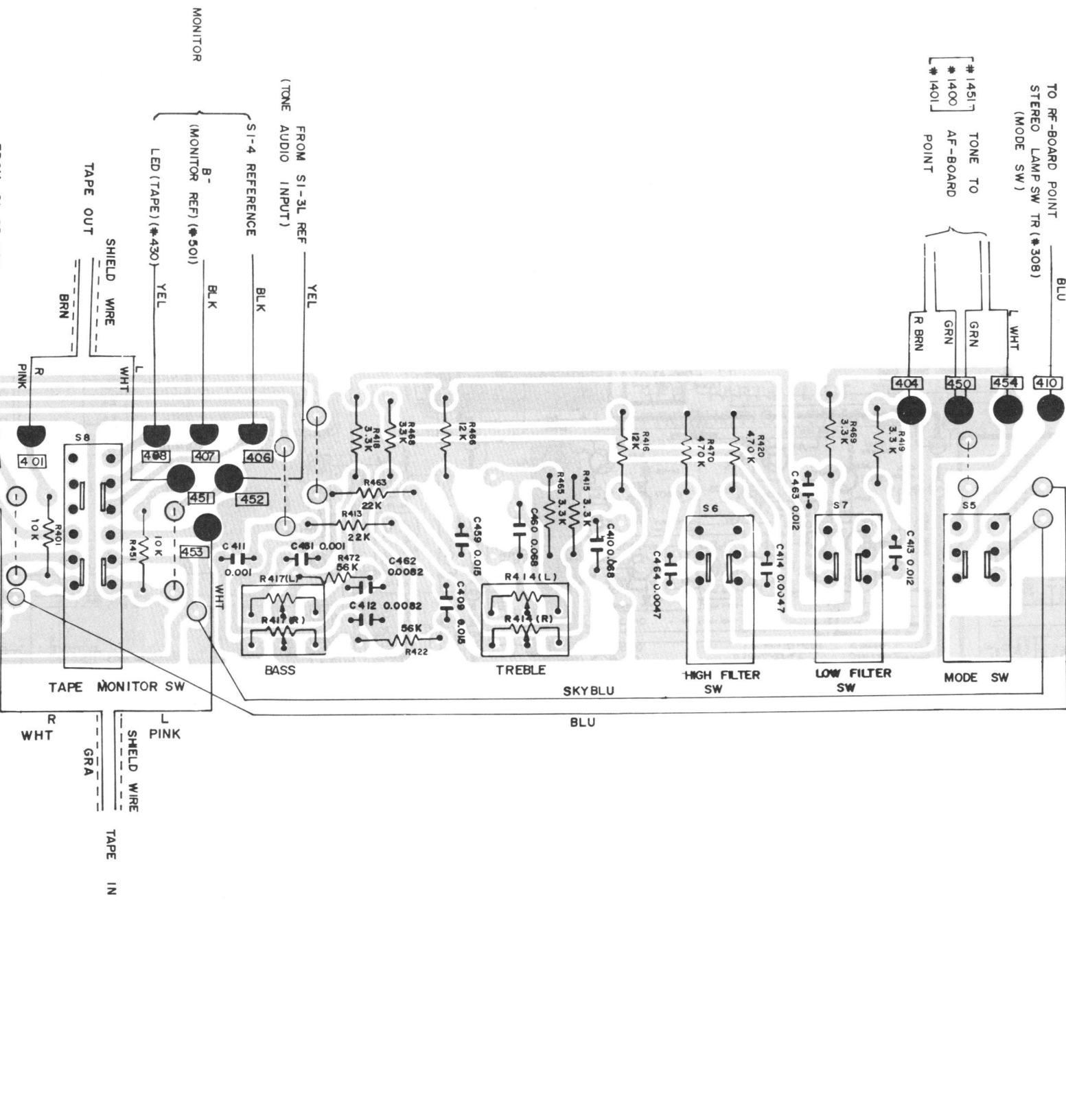
NOTES



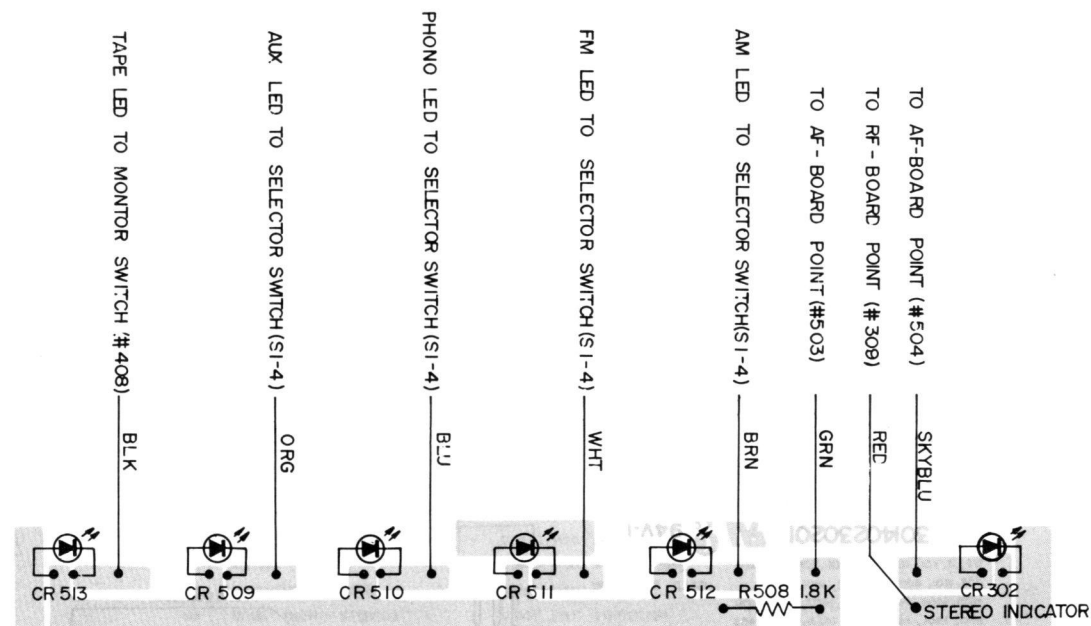
MODEL MC7031 — DE-EMPHASIS SWITCH
CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE



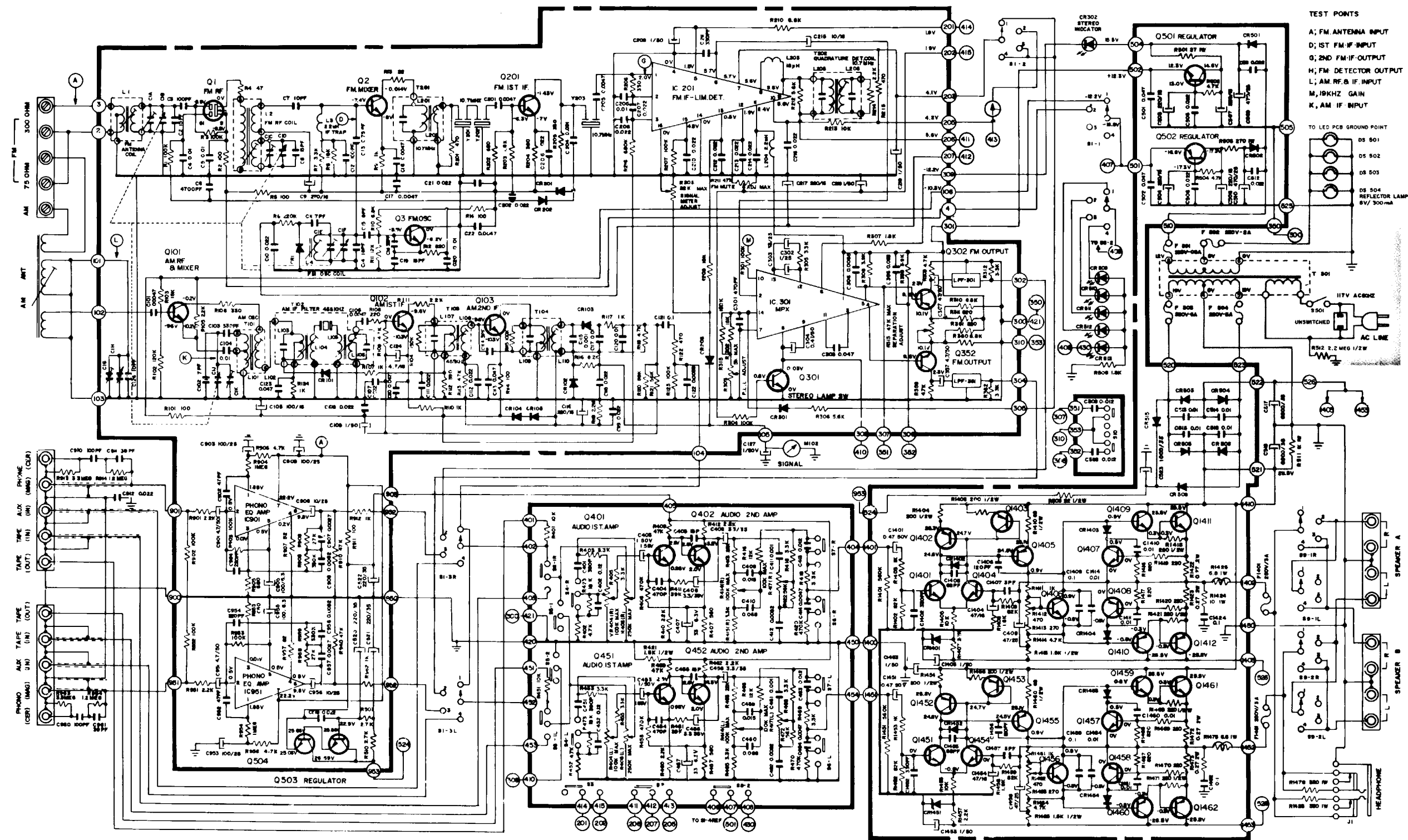
MODEL MC7031 — CONTROL AND PREAMP
CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE



MODEL MC7031 — FUNCTION SWITCH
CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE



MODEL MC7031 — FUNCTION INDICATOR
CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE



TEST POINTS
 A; FM ANTENNA INPUT
 D; 1ST FM IF INPUT
 G; 2ND FM IF OUTPUT
 H; FM DETECTOR OUTPUT
 L; AM RF & IF INPUT
 M; 19KHZ GAIN
 K; AM IF INPUT

NOTE
 1. ALL RESISTANCE VALUES IN OHM, K, KILOHM, M, MEGOHM
 THE WATTAGE OF RESISTORS NOT SPECIFICALLY DESIGNATED
 IS 1/4 WATT
 2. UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITORS IN MF
 PF = PICOFARAD
 3. THERE MIGHT BE SLIGHT CHANGES IN THE ACTUAL SET.
 4. ALL VOLTAGES ARE D.C. UNLESS OTHERWISE SPECIFIED.
 D.C. VOLTAGES SHOWN ARE MEASURED FROM CHASSIS, WITH
 NO SIGNAL INPUT, LOUDNESS SWITCH IN "OFF" POSITION, LINE
 VOLTAGE 120V. A.C. USING A HIGH IMPEDANCE DIGITAL MULTIMETER.

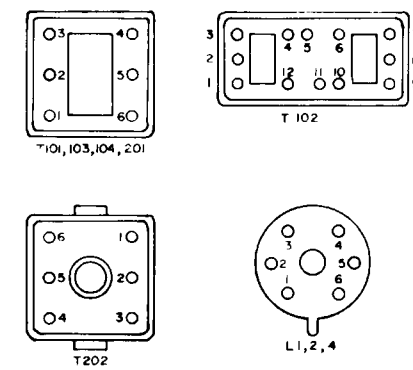
IMPORTANT SAFETY NOTICE
 WHEN SERVICING THIS CHASSIS,
 UNDER NO CIRCUMSTANCES SHOULD
 THE ORIGINAL DESIGN BE MODIFIED
 OR ALTERED WITHOUT PERMISSION
 FROM THE ZENITH RADIO CORPORATION.
 ALL COMPONENTS SHOULD
 BE REPLACED ONLY WITH TYPES
 IDENTICAL TO THOSE IN THE ORIGINAL
 CIRCUIT. SPECIAL COMPONENTS
 ARE USED TO PREVENT
 SHOCK AND FIRE HAZARD. THESE
 CRITICAL COMPONENTS ARE SHADED
 ON THE SCHEMATIC AND PARTS
 LIST FOR EASY IDENTIFICATION.

THIS CIRCUIT DIAGRAM MAY OCCASIONALLY
 DIFFER FROM THE
 ACTUAL CIRCUIT USED. THIS WAY,
 IMPLEMENTATION OF THE LATEST
 SAFETY AND PERFORMANCE IMPROVEMENT
 CHANGES INTO THE
 SET IS NOT DELAYED UNTIL THE
 NEW SERVICE LITERATURE IS
 PRINTED.

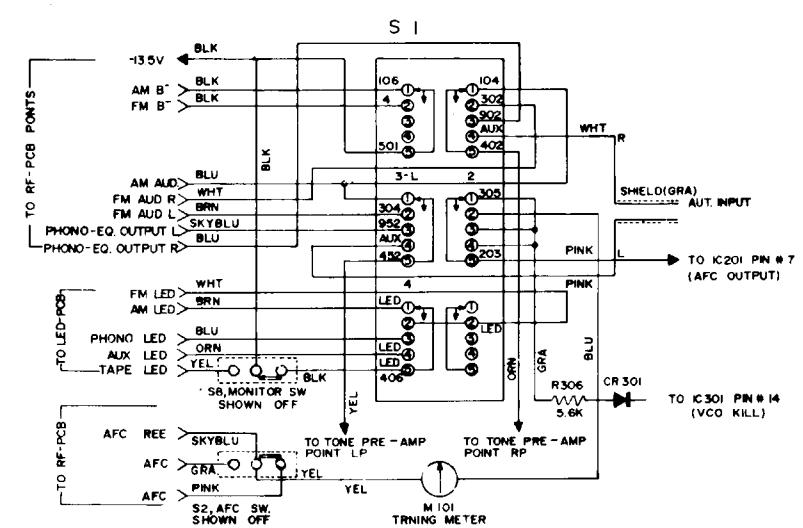
IC VOLTAGES

PIN	MONAURAL	STEREO
1	11.45	12
2	3.2	3.1
3	5.5	5.2
4	9.0	9.3
5	9.0	9.3
6	13.7	0.7
7	0	0
8	0.04	2.4
9	2.4	2.37
10	1.58	1.56
11	2.2	2.4
12	2.4	2.4
13	2.4	2.4
14	3.3	3.2

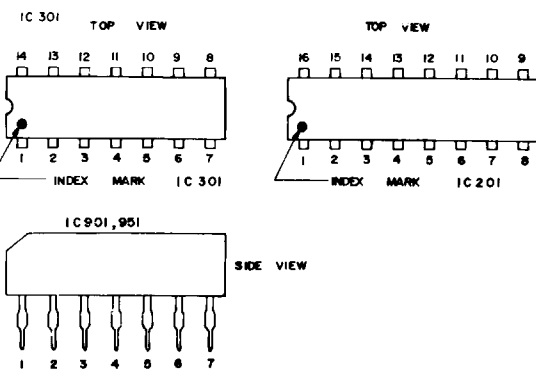
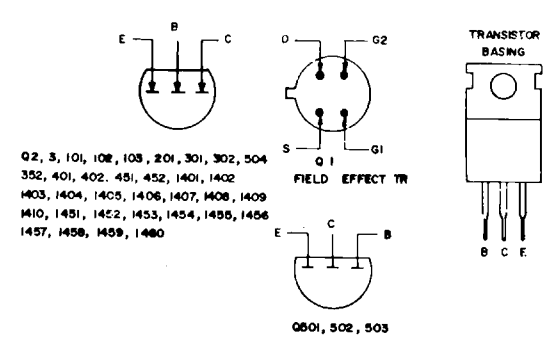
COIL TRANSFORMER (BOTTOM VIEW)



NOTE - SEE PARTS LIST FOR PRODUCTION CHANGES



TRANSISTOR LAYOUT (LEAD END VIEWS)



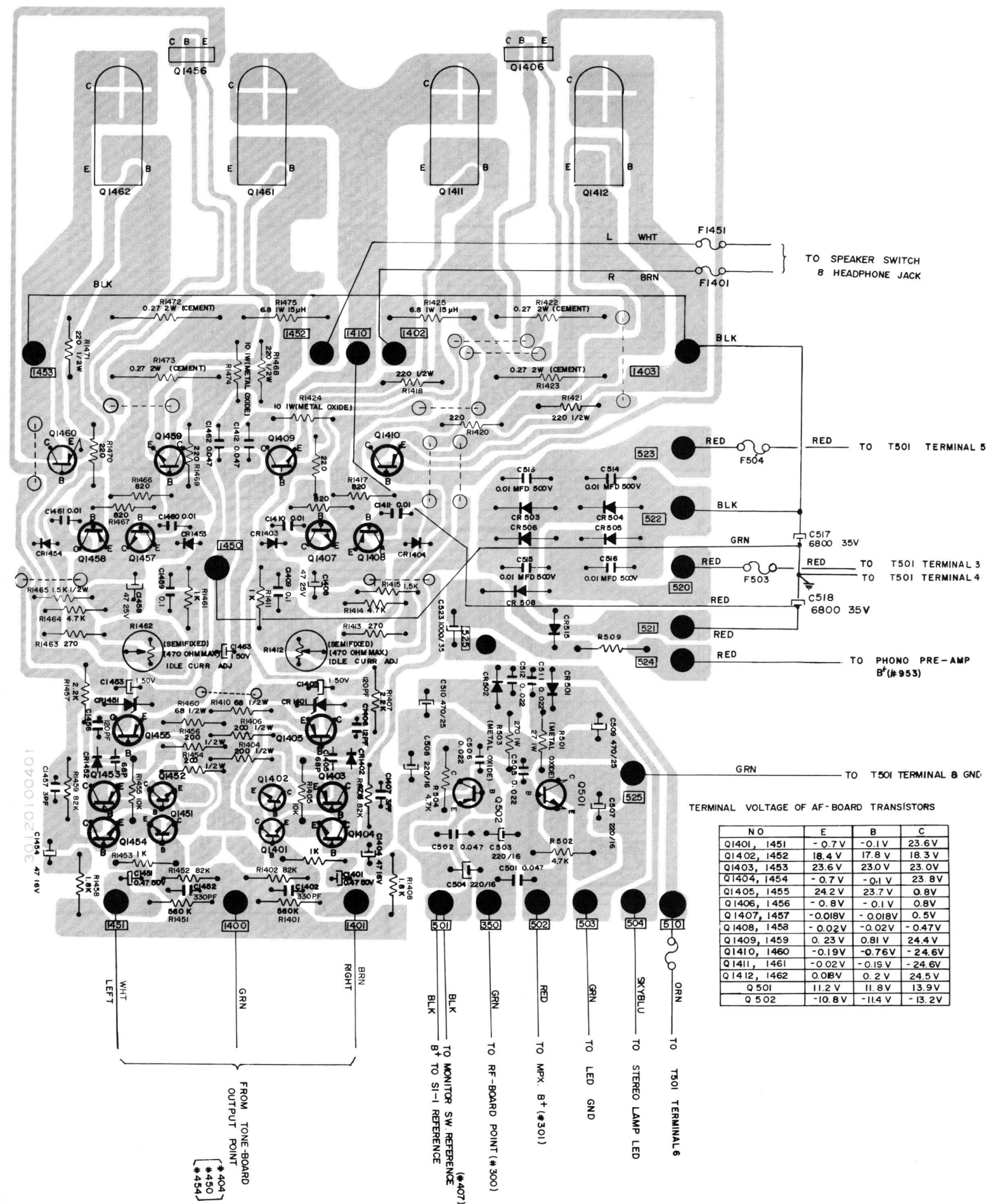
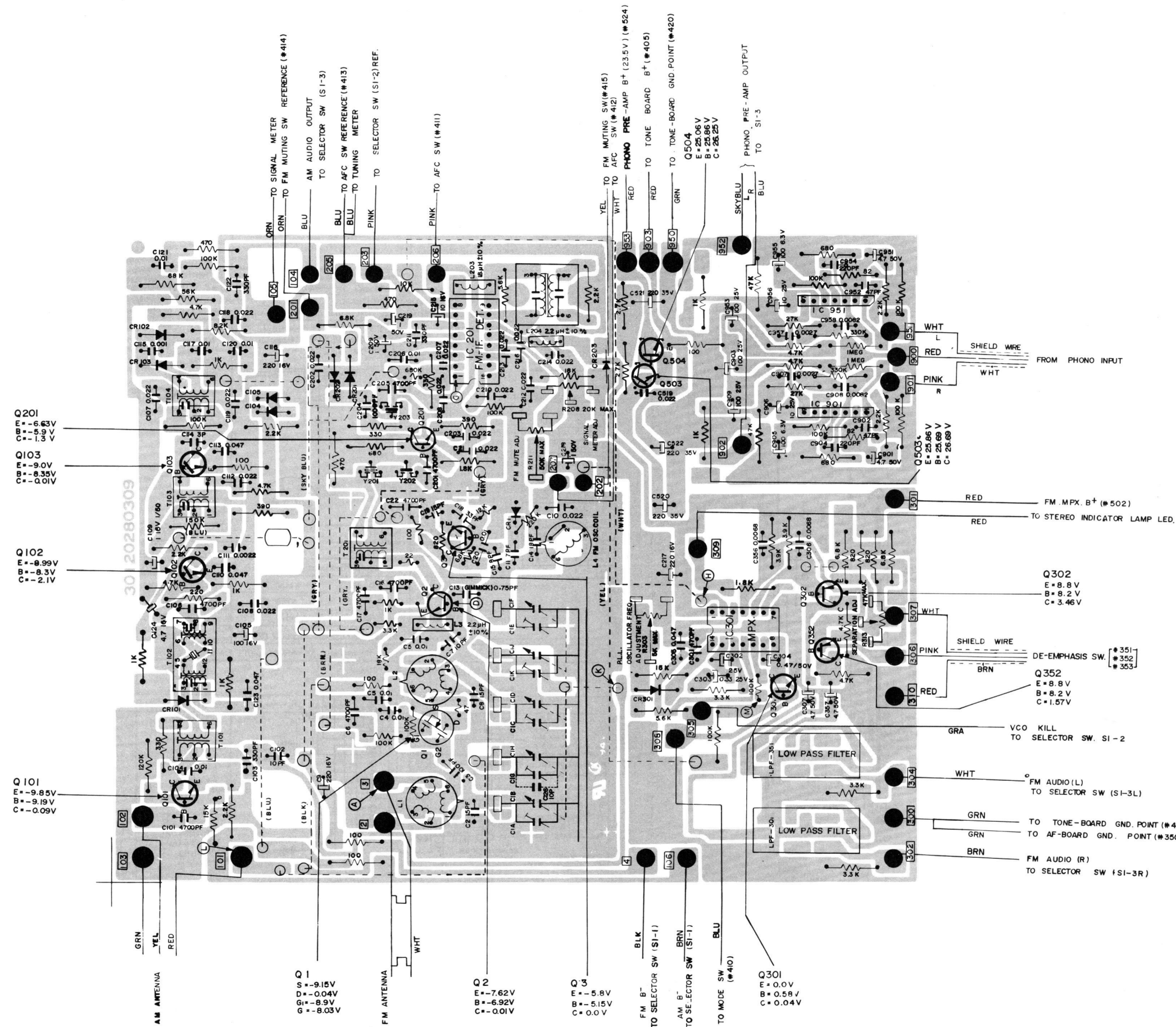
VR CONTROL
 R404 VOLUME
 R406 BALANCE
 R414 BASS
 R417 TREBLE

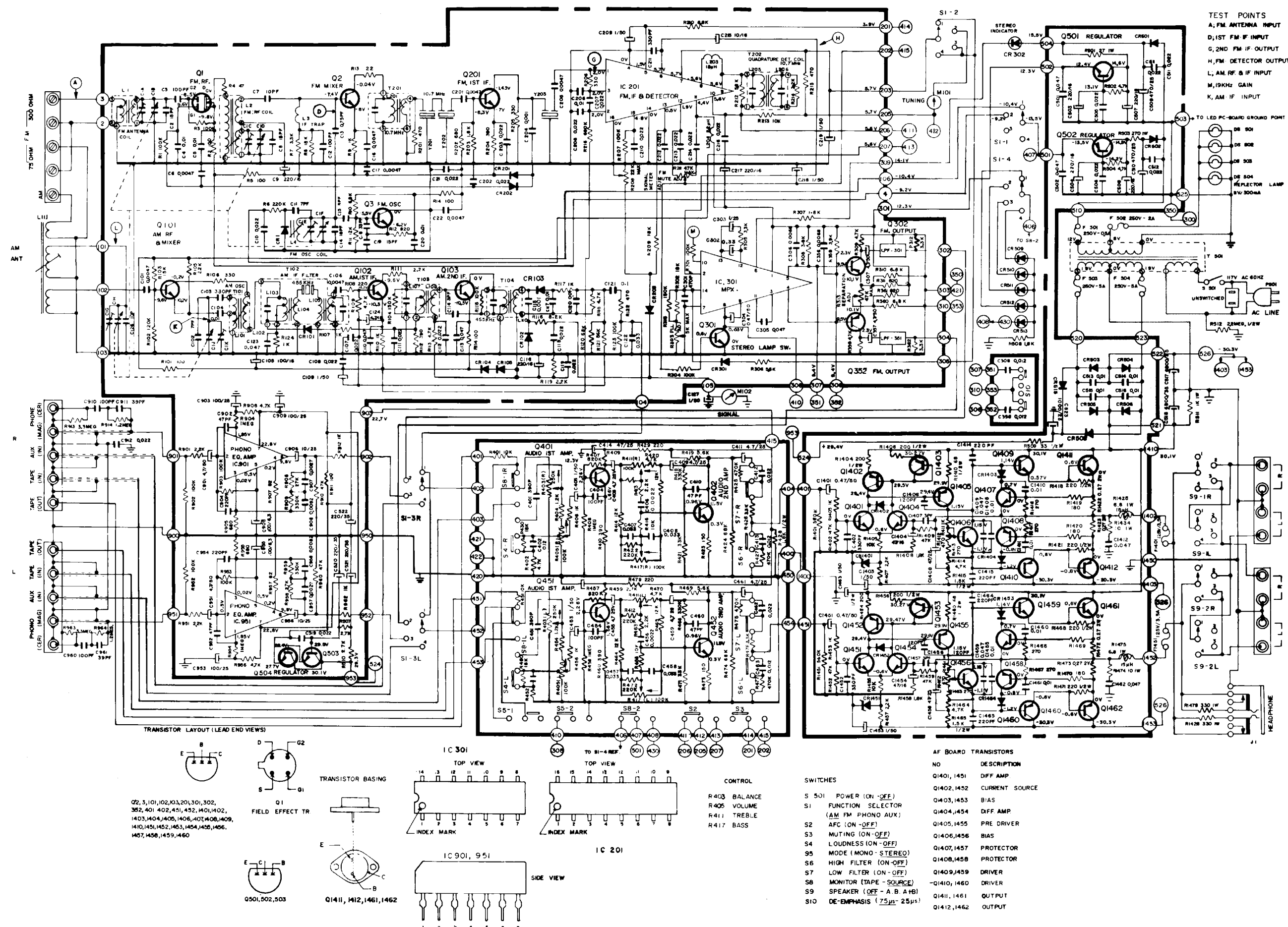
SWITCHES
 S 501 POWER (ON-OFF)
 S1 FUNCTION SELECTOR (AM, FM, PHONO, AUX)
 S2 AFC (ON-OFF)
 S3 MUTING (ON-OFF)
 S4 LOUDNESS (ON-OFF)
 S5 MODE (MONO-STEREO)
 S6 HIGH FILTER (ON-OFF)
 S7 LOW FILTER (ON-OFF)
 S8 MONITOR (TAPE-SOURCE)
 S9 SPEAKER (OFF-A B A B)
 S10 DE-EMPHASIS (75µs-25µs)

AF BOARD TRANSISTORS
 NO DESCRIPTION
 Q1401, M51 DIFF AMP
 Q1402, J452 CURRENT SOURCE
 Q1403, M53 BIAS
 Q1404, M54 DIFF AMP
 Q1405, M55 PRE DRIVER
 Q1406, M56 BIAS
 Q1407, M57 PROTECTOR
 Q1408, M58 PROTECTOR
 Q1409, M59 DRIVER
 Q1410, M60 DRIVER
 Q1411, M61 OUTPUT
 Q1412, M62 OUTPUT

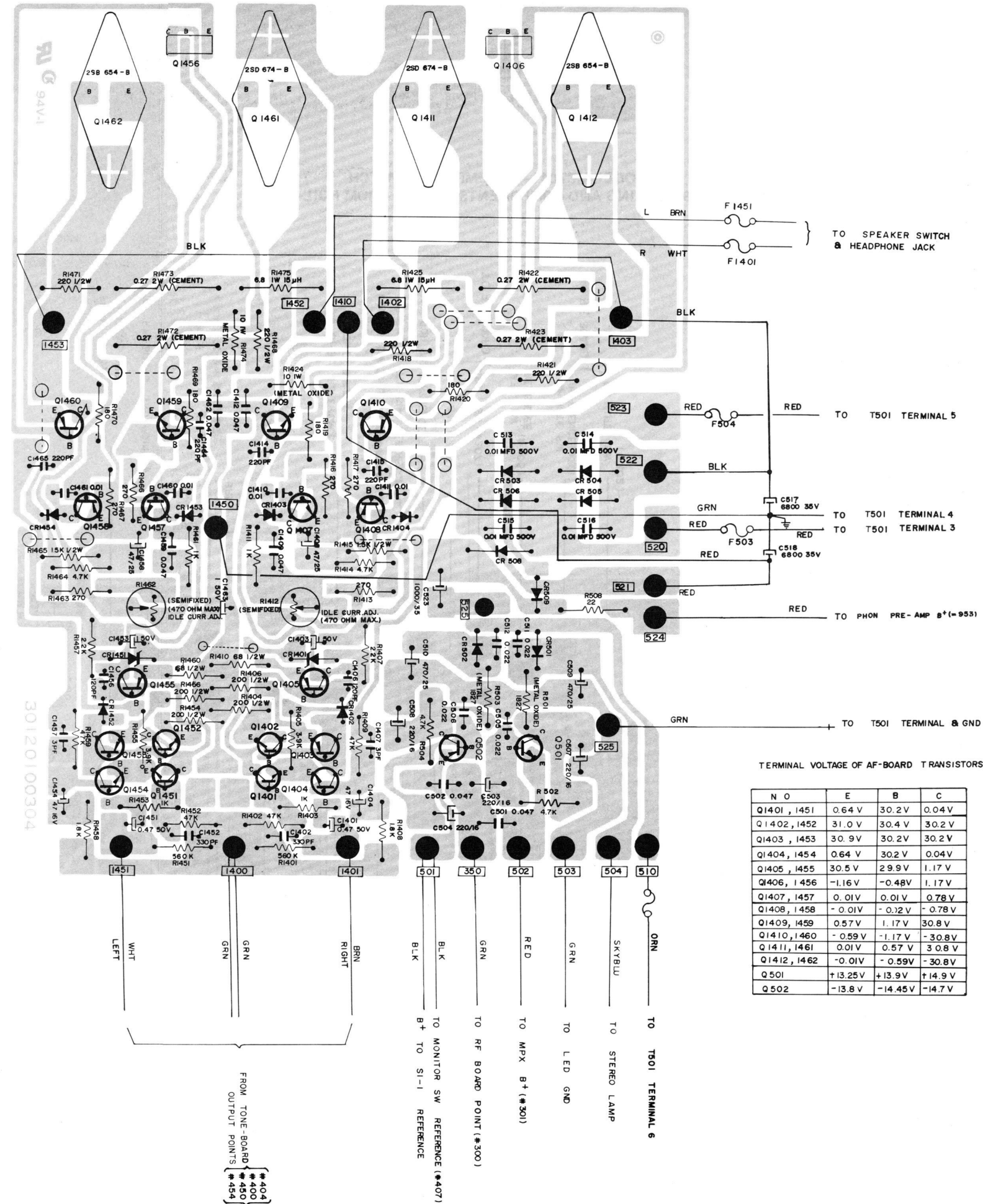
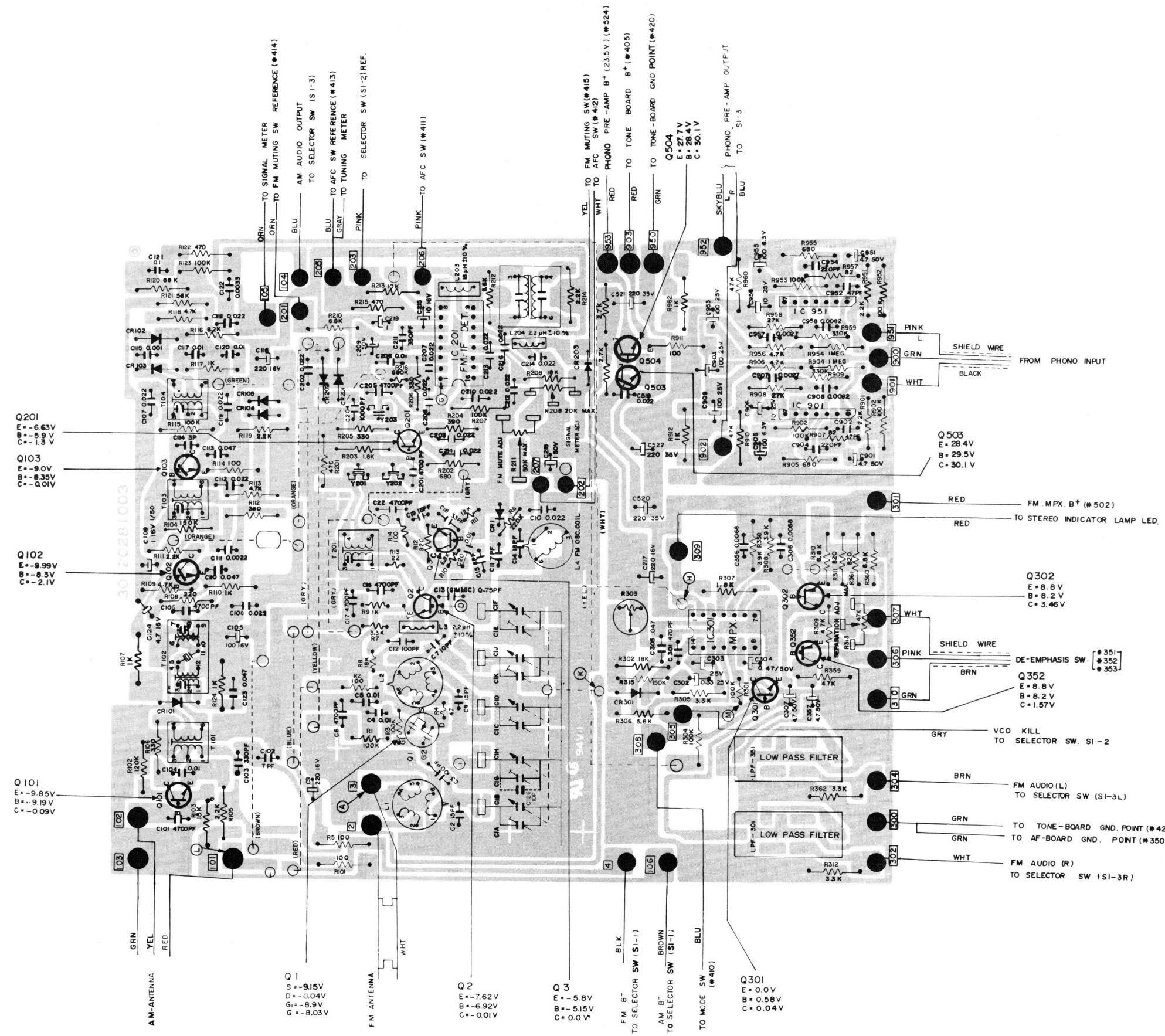
SWITCH POSITIONS	CONNECTIONS
1. AM (SHOWN)	5-1
2. FM	5-2
3. PHONO	5-3
4. AUX	5-4

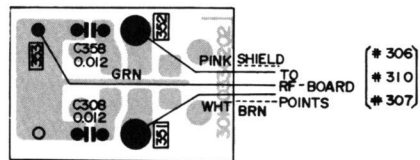
ARROW INDICATES MOVEMENT OF WIPER CORRESPONDING TO CLOCKWISE ROTATION OF SHAFT. SWITCH CONTACTS HAVE BEEN ASSIGNED ALPHANUMERIC DESIGNATIONS TO ASSIST SERVICE TECHNICIANS IN CIRCUIT TRACING.



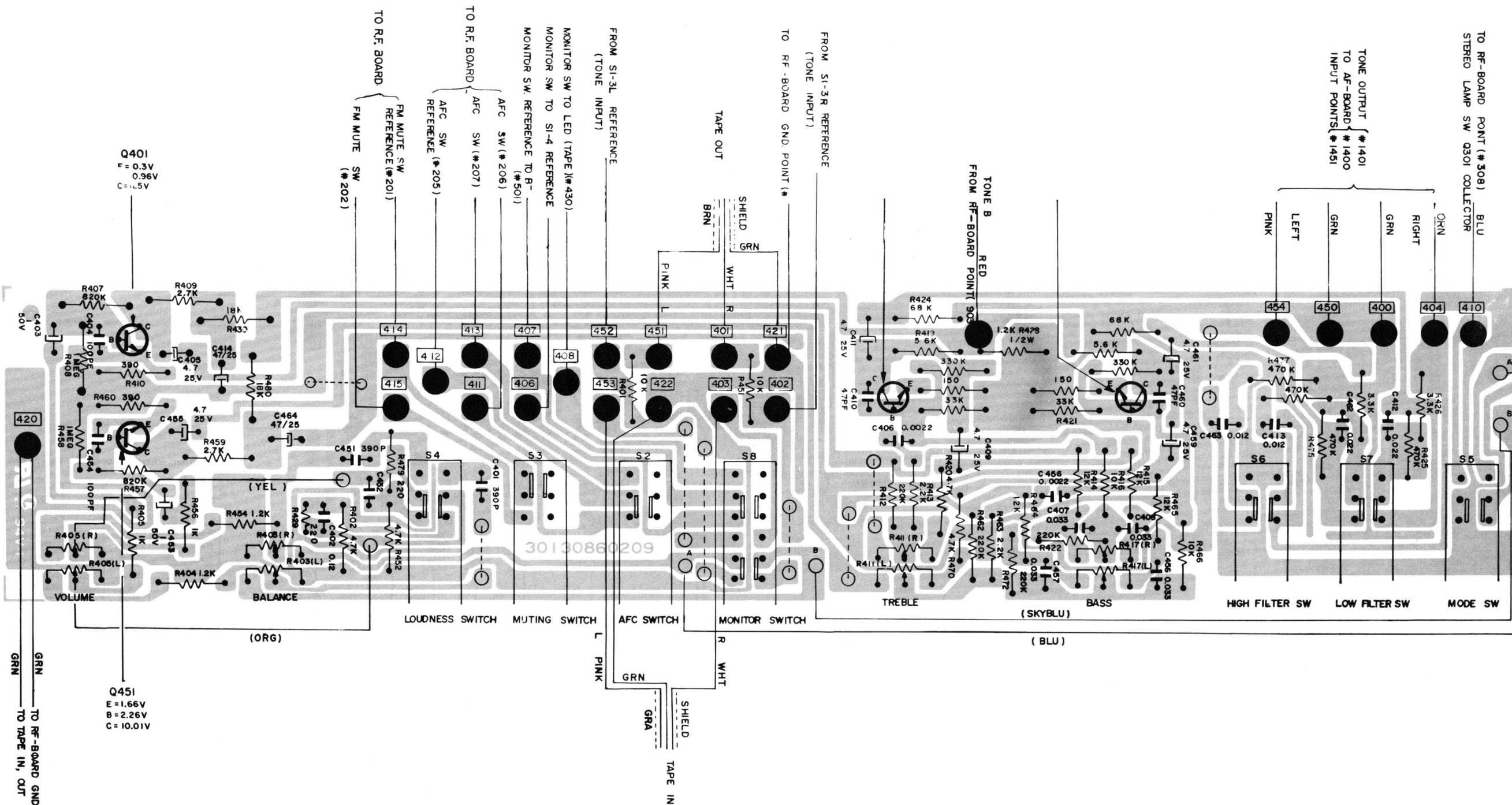


MODEL MC7041 - SCHEMATIC

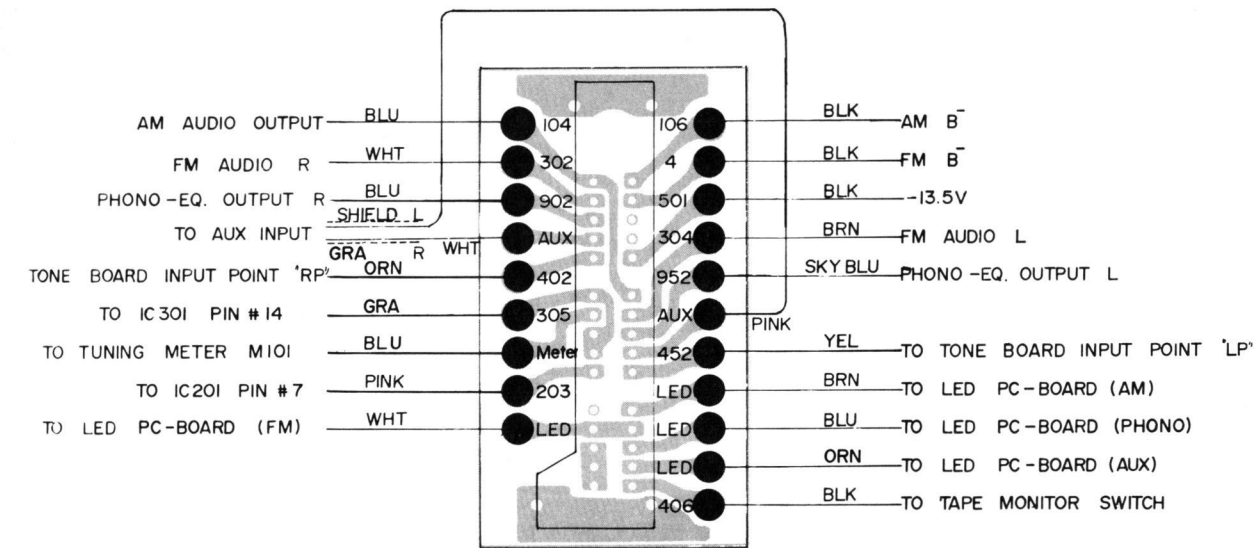




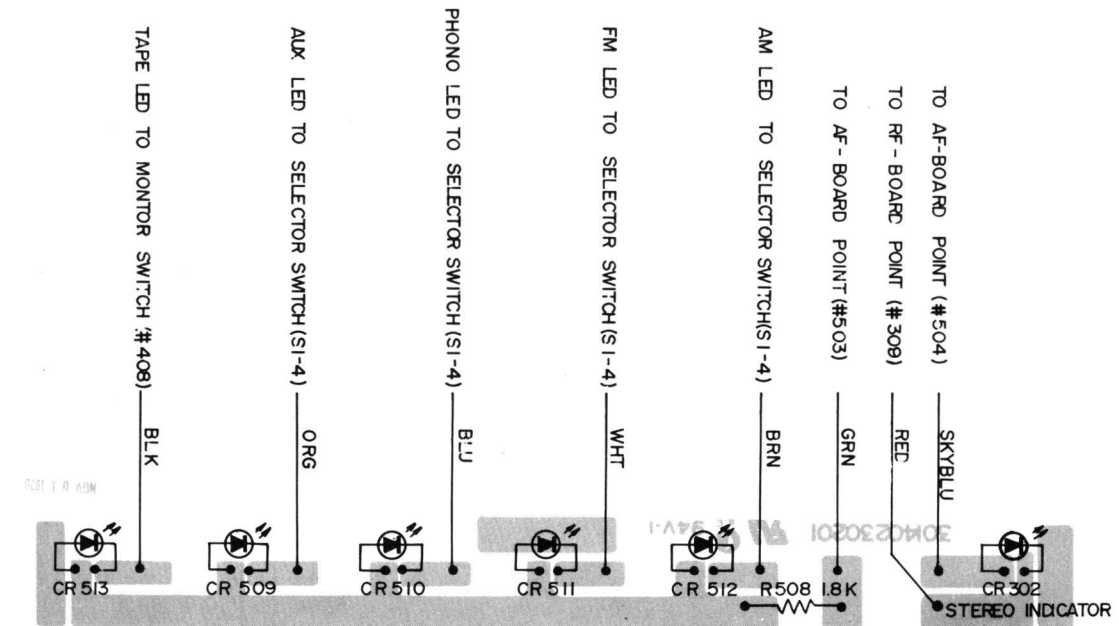
MODEL MC7041 – DE-EMPHASIS SWITCH
CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE



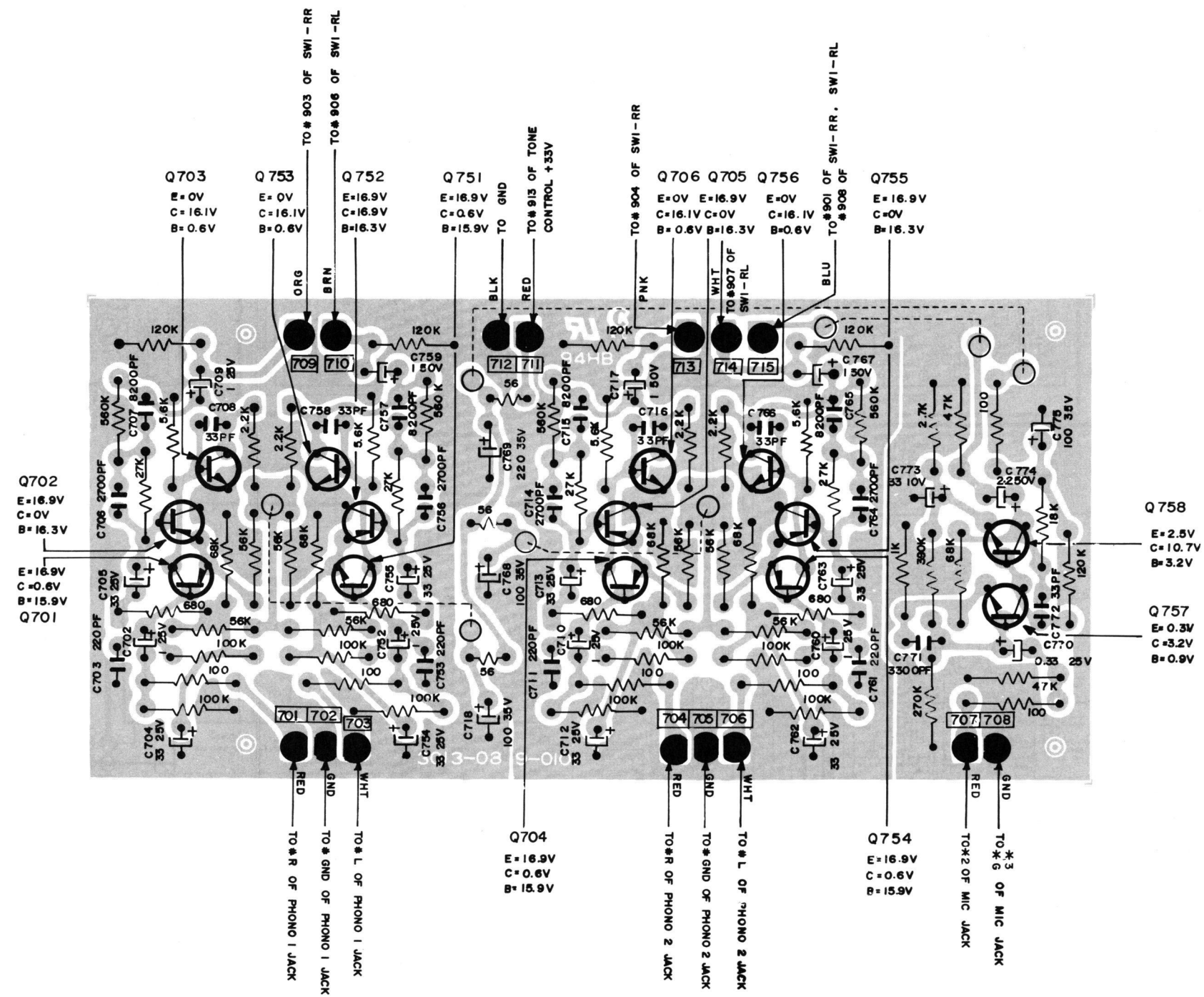
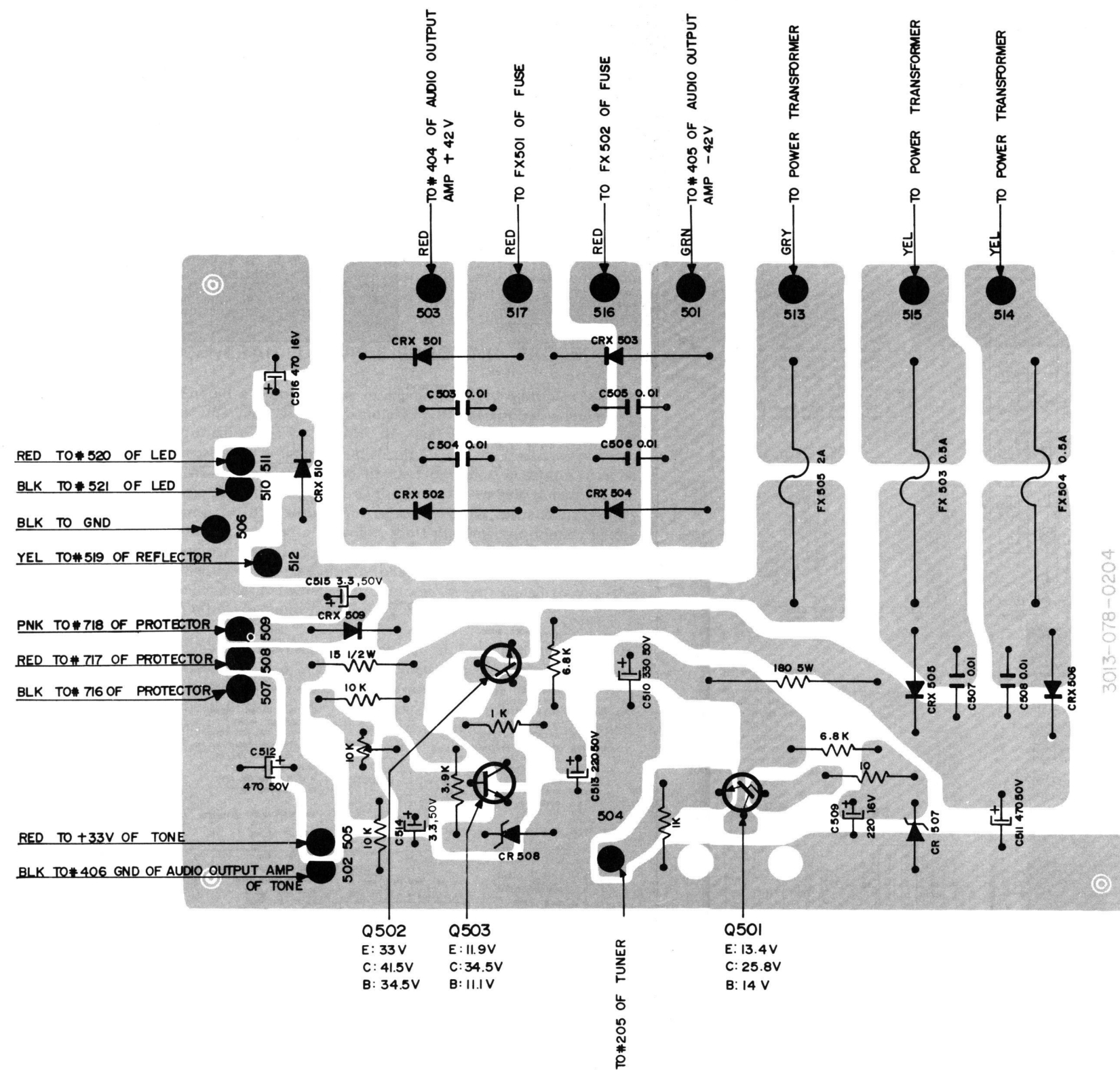
MODEL MC7041 – CONTROL AND PREAMP
CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE

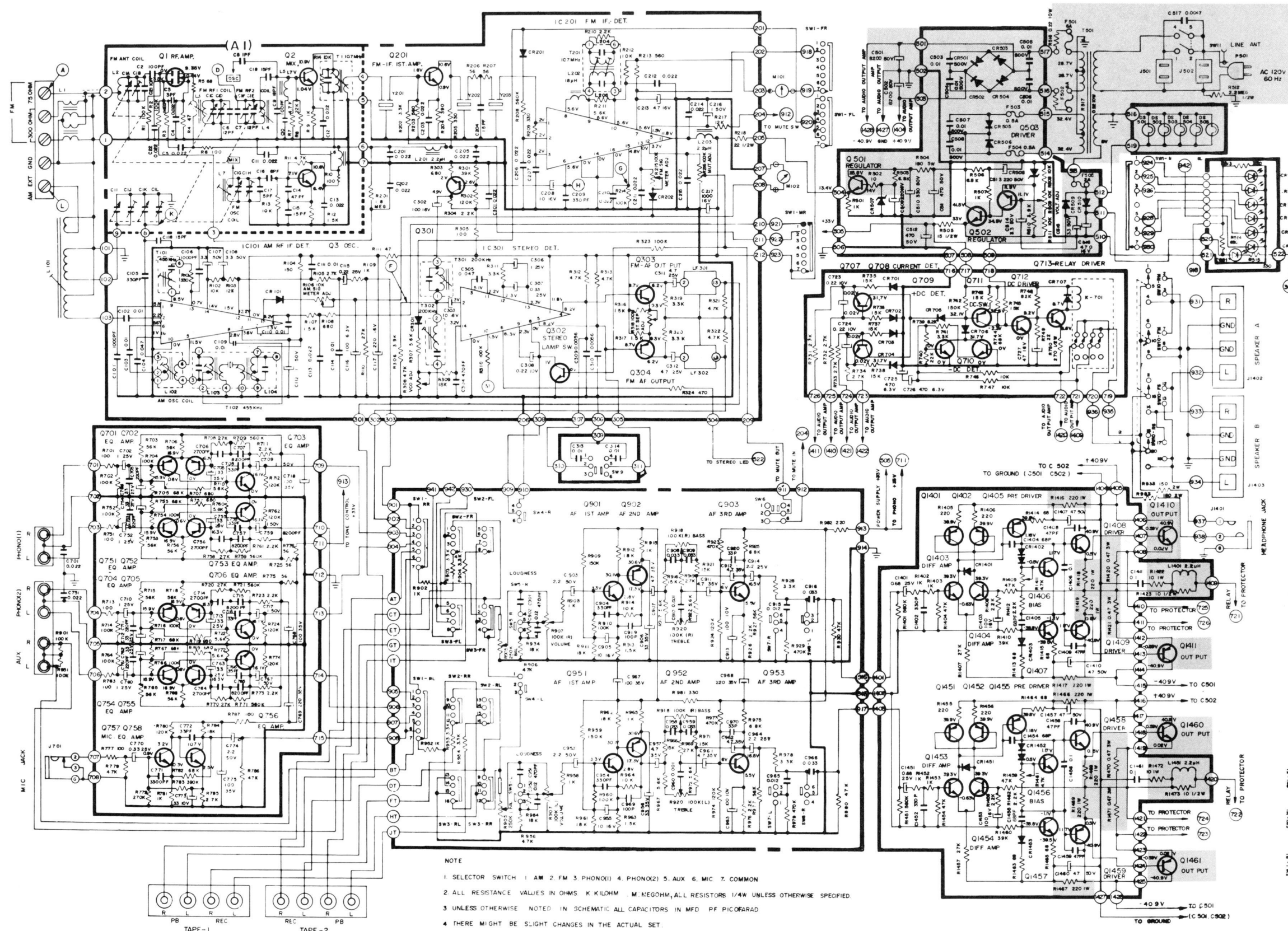


MODEL MC7041 – FUNCTION SWITCH
CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE



MODEL MC7041 – FUNCTION INDICATOR
CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE

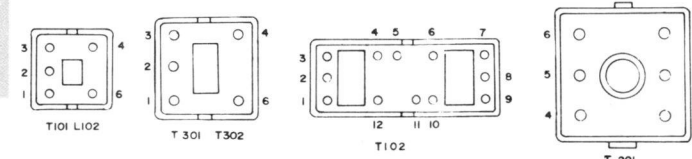




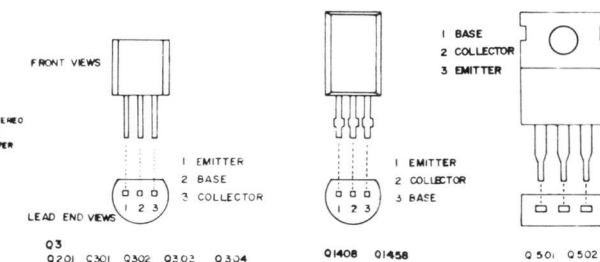
NOTE

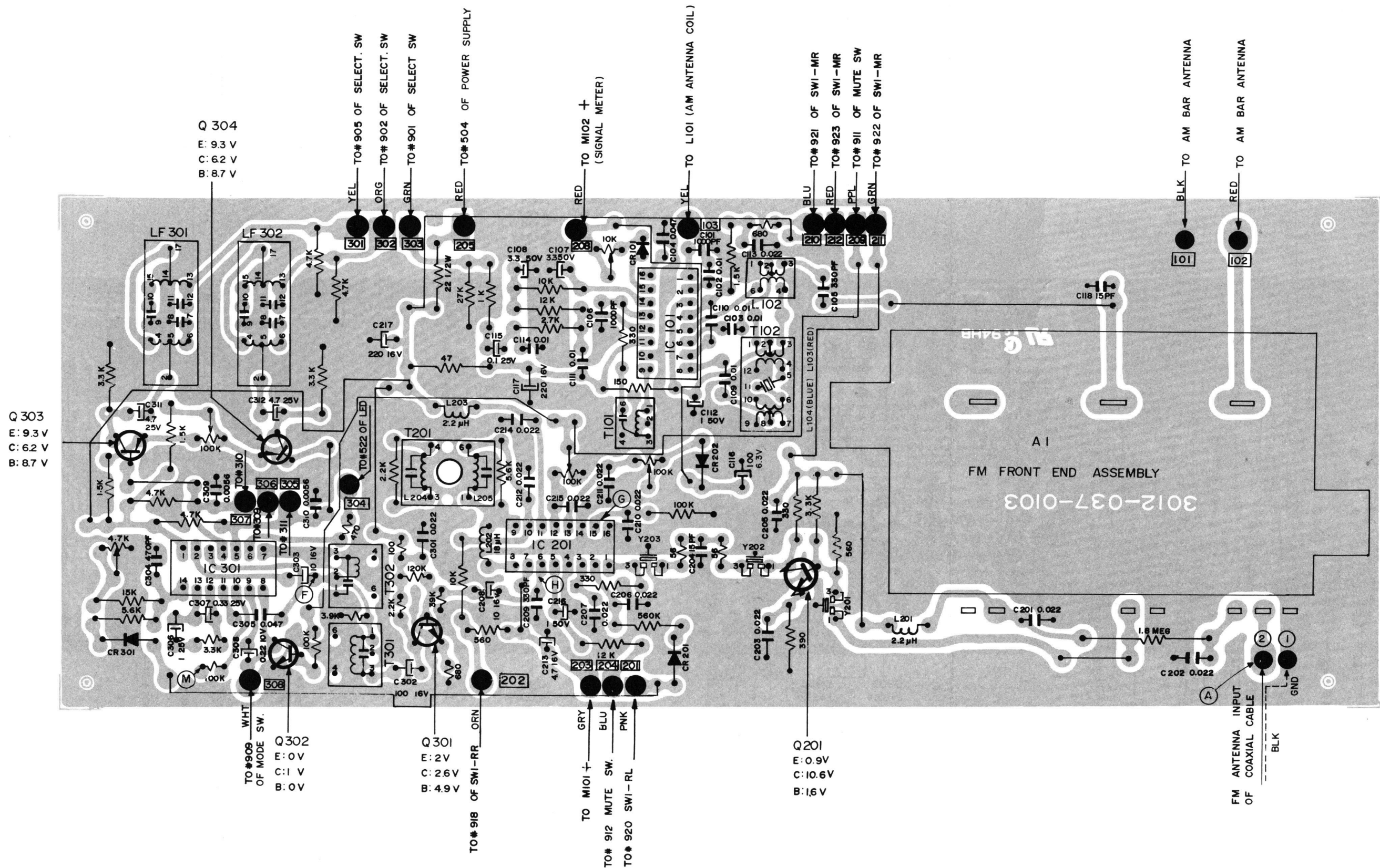
1. SELECTOR SWITCH 1. AM 2. FM 3. PHONO(1) 4. PHONO(2) 5. AUX 6. MIC 7. COMMON
2. ALL RESISTANCE VALUES IN OHMS K. KILOHM M. MEGOHM, ALL RESISTORS 1/4W UNLESS OTHERWISE SPECIFIED
3. UNLESS OTHERWISE NOTED IN SCHEMATIC ALL CAPACITORS IN MFD PF PICOFARAD
4. THERE MIGHT BE SLIGHT CHANGES IN THE ACTUAL SET
5. ALL VOLTAGES ARE DC UNLESS OTHERWISE SPECIFIED, DC VOLTAGES SHOWN ARE MEASURED FROM CHASSIS WITH NO SIGNAL INPUT, LOUDNESS SWITCH IN OFF POSITION, LINE VOLTAGE 120V AC, USING A HIGH IMPEDANCE DIGITAL MULTIMETER

COIL & TRANSFORMER (BOTTOM VIEWS)



TRANSISTOR LEAD LAYOUT





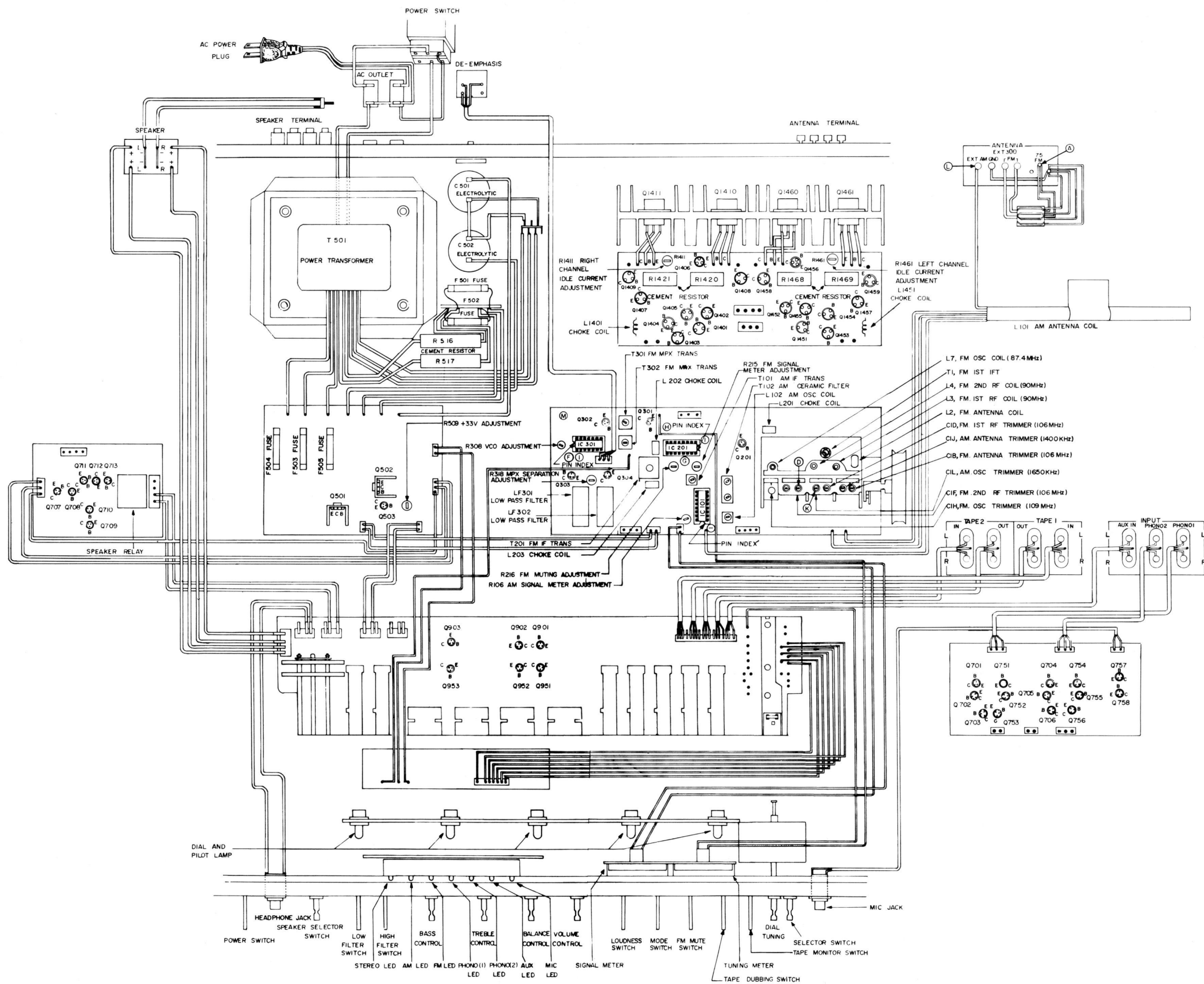
PIN NO	VOLTAGE
1	5.1 V
2	2.2 V
3	11.5 V
4	9.2 V
5	11.5 V
6	3.6 V
7	1.3 V
8	2.8 V
9	8.5 V
10	0 V
11	12.2 V
12	1.5 V
13	0.7 V
14	1.4 V
15	0 V
16	1.0 V

PIN NO	VOLTAGE
1	2.0 V
2	2.0 V
3	2.0 V
4	0 V
5	1.5 V
6	5.6 V
7	5.6 V
8	5.6 V
9	5.6 V
10	5.6 V
11	11.8 V
12	3.7 V
13	0 V
14	0 V
15	4.8 V
16	0 V

PIN NO	VOLTAGE
1	11.3 V
2	3.0 V
3	5.1 V
4	8.2 V
5	8.2 V
6	8.3 V
7	0 V
8	0 V
9	2.3 V
10	1.5 V
11	2.2 V
12	2.2 V
13	2.2 V
14	3.2 V

MODEL MC7051 - RF/IF/MPX
CHASSIS WIRING AND COMPONENTS VIEWED FROM FOIL SIDE

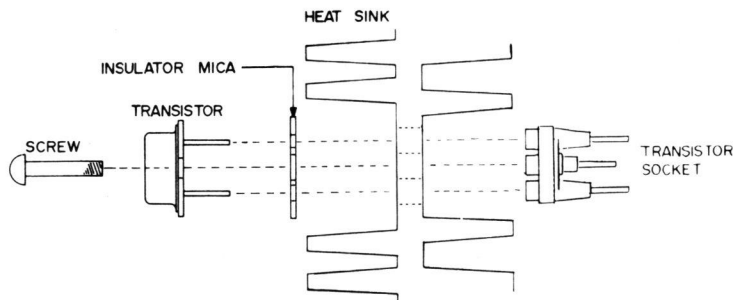
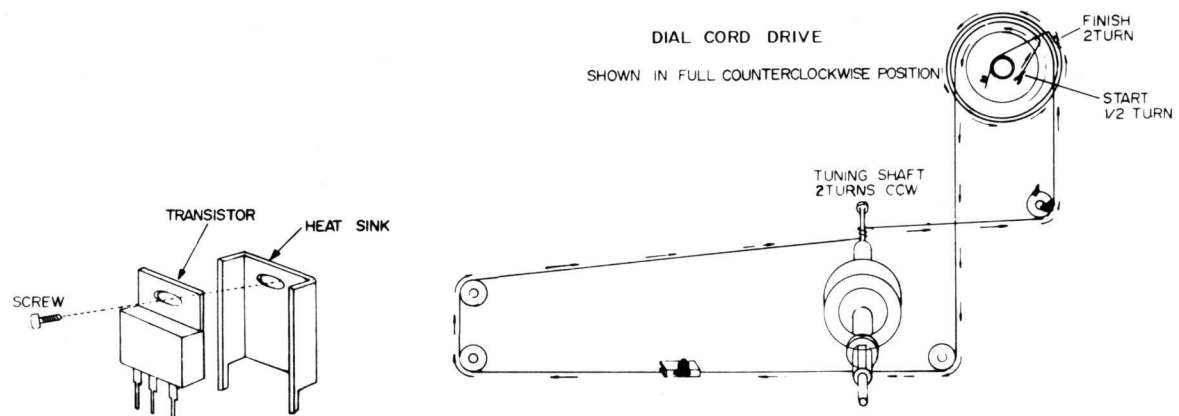




TRANSISTOR	
NO	DESCRIPTION
Q 201	FM-IF 1ST AMPLIFIER
Q 301	FM AUDIO AMPLIFIER
Q 302	STEREO LAMP SWITCH
Q 303	FM-AF OUTPUT
Q 304	FM-AF OUTPUT
Q 501	REGULATOR
Q 502	REGULATOR
Q 503	DRIVER
Q 701	EQUALIZER AMPLIFIER
Q 702	EQUALIZER AMPLIFIER
Q 703	EQUALIZER AMPLIFIER
Q 704	EQUALIZER AMPLIFIER
Q 705	EQUALIZER AMPLIFIER
Q 706	EQUALIZER AMPLIFIER
Q 707	CURRENT DETECTOR
Q 708	CURRENT DETECTOR
Q 709	+DC DETECTOR
Q 710	-DC DETECTOR
Q 711	DC SWITCH
Q 712	DC DRIVER
Q 713	RELAY DRIVER
Q 751	EQUALIZER AMPLIFIER
Q 752	EQUALIZER AMPLIFIER
Q 753	EQUALIZER AMPLIFIER
Q 754	EQUALIZER AMPLIFIER
Q 755	EQUALIZER AMPLIFIER
Q 756	EQUALIZER AMPLIFIER
Q 757	MIC EQUALIZER AMPLIFIER
Q 758	MIC EQUALIZER AMPLIFIER
Q 901	AF 1ST AMPLIFIER
Q 902	AF 2ND AMPLIFIER
Q 903	AF 3RD AMPLIFIER
Q 951	AF 1ST AMPLIFIER
Q 952	AF 2ND AMPLIFIER
Q 953	AF 3RD AMPLIFIER

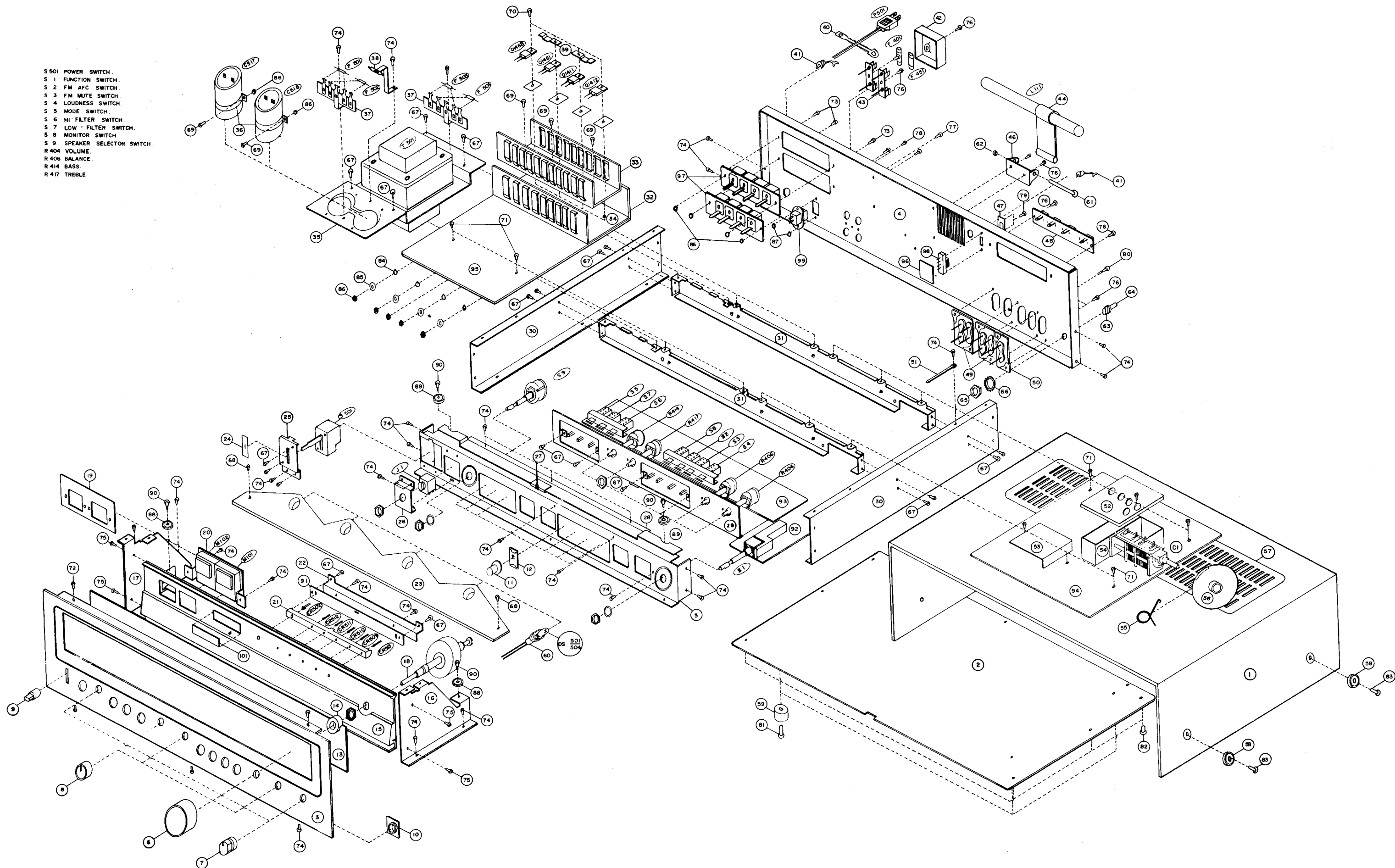
TEST POINTS	
A	FM ANTENNA INPUT
H	FM DETECTOR OUTPUT
K	AM IF INPUT
L	AM RF INPUT
M	19KHz OSCILLATOR OUTPUT
D	1ST FM IF INPUT
G	FM IF OUTPUT
F	MPX INPUT

TRANSISTOR	
NO	DESCRIPTION
Q 1401	CURRENT SOURCE
Q 1402	BIAS
Q 1403	DIFF AMP
Q 1404	DIFF AMP
Q 1405	PRE DRIVER
Q 1406	BIAS
Q 1407	PRE DRIVER
Q 1408	DRIVER
Q 1409	DRIVER
Q 1410	OUTPUT
Q 1411	OUTPUT
Q 1451	CURRENT SOURCE
Q 1452	BIAS
Q 1453	DIFF AMP
Q 1454	DIFF AMP
Q 1455	PRE DRIVER
Q 1456	BIAS
Q 1457	PRE DRIVER
Q 1458	DRIVER
Q 1459	DRIVER
Q 1460	OUTPUT
Q 1461	OUTPUT
IC 101	AM RF IF DETECTOR
IC 201	FM IF DETECTOR
Q 1	FM RF AMPLIFIER
Q 2	FM CONVERTER
Q 3	FM OSCILLATOR



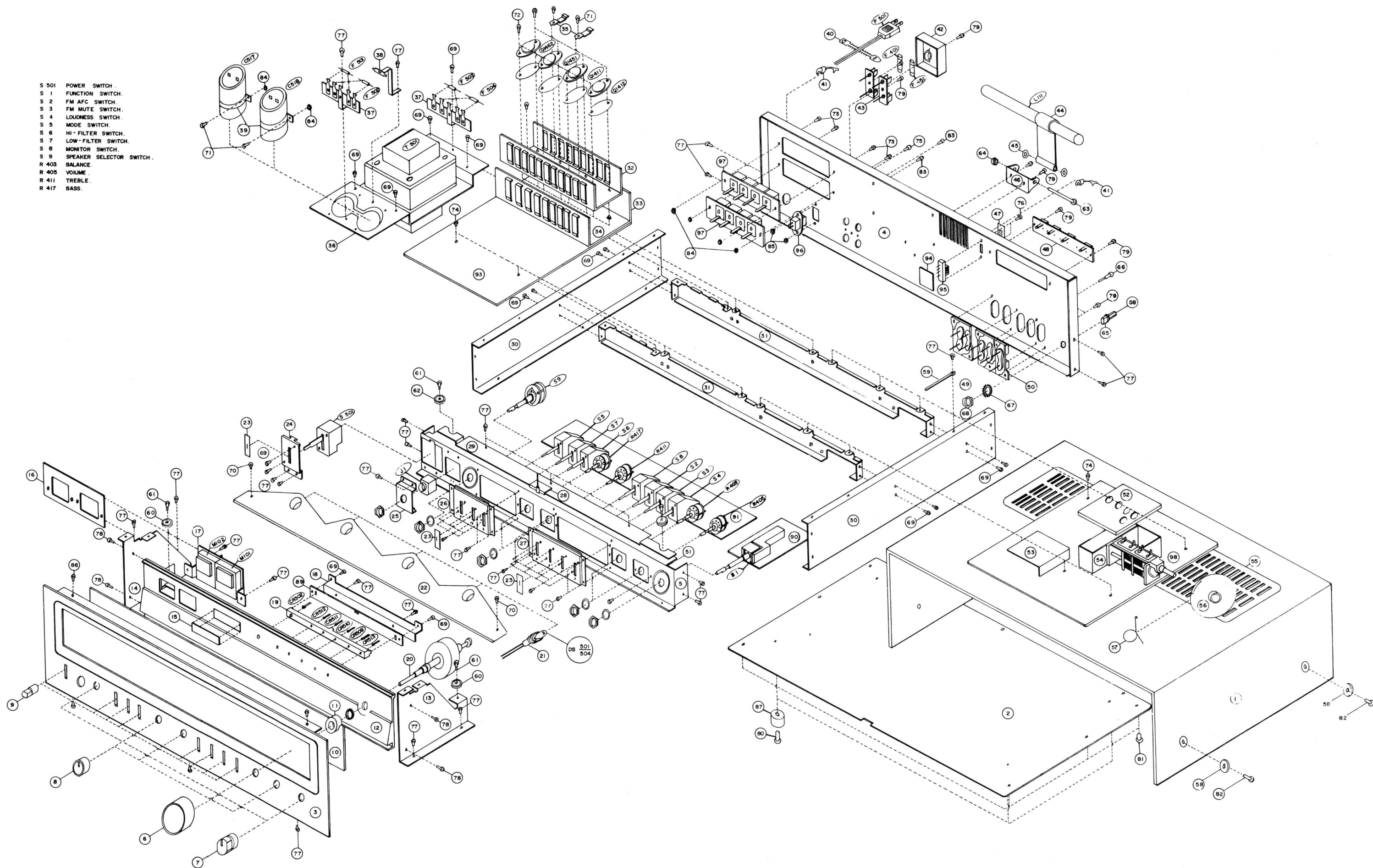
MODEL MC7051 - CHASSIS LAYOUT

- S 501 POWER SWITCH.
- S 1 FUNCTION SWITCH.
- S 2 FM AFC SWITCH.
- S 3 FM MUTE SWITCH.
- S 4 LOUDNESS SWITCH.
- S 5 MODE SWITCH.
- S 6 HI-FILTER SWITCH.
- S 7 LOW-FILTER SWITCH.
- S 8 MONITOR SWITCH.
- S 9 SPEAKER SELECTOR SWITCH.
- R 404 VOLUME.
- R 406 BALANCE.
- R 414 BASS.
- R 417 TREBLE.

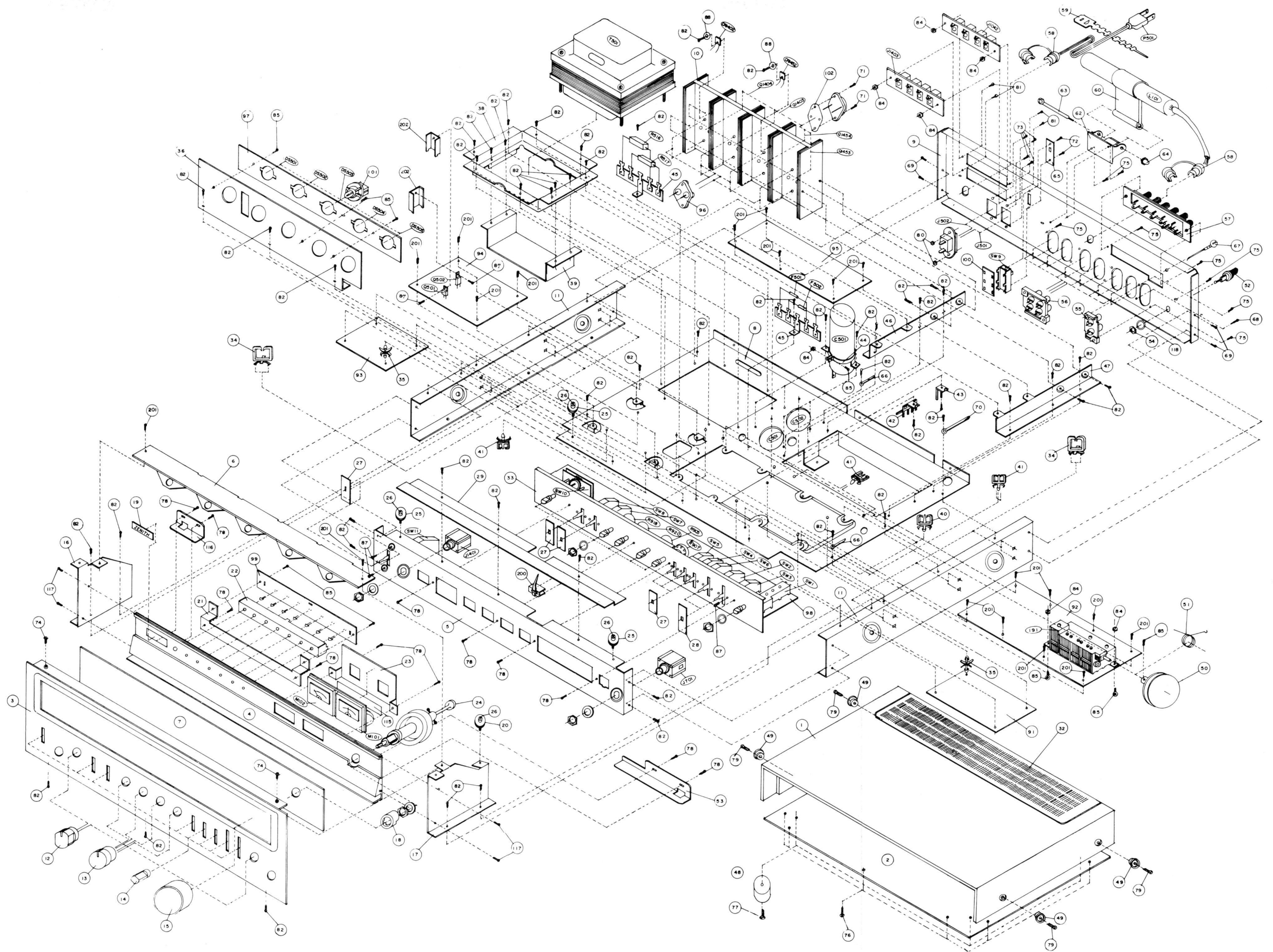


MODEL MC7031 - EXPLODED VIEW

- S 501 POWER SWITCH.
- S 1 FUNCTION SWITCH.
- S 2 FM AFC SWITCH.
- S 3 FM MUTE SWITCH.
- S 4 LOUDNESS SWITCH.
- S 5 MODE SWITCH.
- S 6 HI-FILTER SWITCH.
- S 7 LOW-FILTER SWITCH.
- S 8 MONITOR SWITCH.
- S 9 SPEAKER SELECTOR SWITCH.
- R 403 BALANCE.
- R 405 VOLUME.
- R 411 TREBLE.
- R 417 BASS.



MODEL MC7041 — EXPLODED VIEW



MODEL MC7051 – EXPLODED VIEW

NOTES